Plan Overview

A Data Management Plan created using DMPonline

Title: Tunge Survey

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Tunge Survey

Data collection - 1

What data types are collected or generated to answer the project's main objectives?

The goal of the Kattegat sole survey is to estimate the abundance, biomass and distribution of cod and to establish a fisheries independent time series of catch and effort series. Furthermore, a recruitment index will be established. The results should be used, together with commercial catch and effort data to strengthen the scientific advice on the sole stock in Kattegat.

Which file formats are the data in?

SQL database format

How much data will be generated?

- 0-5 GB

If you are using non digital data (e.g. physical objects), how are you storing those data?

Otoliths are stored in storage room in a DTU lab.
Genetics are stored as tissue samples in a freezer in DTU Silkeborg.
Paper versions of logbooks are stored in a DTU lab.

Data collection - 2

Which data collection standards will you use?

The survey is conducted in accordance with the sole survey manual, found at Q:\scientific_projects\tunge-survey

Which methodology will you use to collect the data?

The survey has been conducted by a number of different trawlers throughout the time series but they have all been in the same size class.

Time

The survey is conducted each year in November.

Survey area

The traditional survey area is restricted by a line 10 mile west of Hirtshals, northwards by the 100 m depth contour line and a line at 58°N, south-eastwards by a line between Gilleleje and Kullen and south-westwards by a line between Gniben og Hassensør on Djursland. Further, the area is restricted by the 10 m depth contour line. In 2016 and 2017 stations were also placed in Jammerbugt and northern part of Storebælt.

Distribution of hauls

The survey was originally designed in order to establish fisheries independent CPUE indices by means of annual fishing at 120 fixed stations, 60 stations were placed by the fishermen and 60 by DTU-Aqua. In 2010 Stations 30, 48, 49 and 50 in the northern area were excluded from the survey and the total number of stations reduced to 116. In 2011 the survey was reduced further to 80 stations, all included in the originally set up. In 2016 and 2017 further 20 stations were placed in Jammerbugt and 6 stations in the northern part of Storebælt but they are not included in the estimation of the CPUE etc.

The reduction in stations in 2011has decreased the overall number (and kg) of sole caught per hour, but the trend in the CPUE series has not changed. (It is the trend in the CPUE series, not the actual values that is used in the assessment of sole).

The estimated trawlable biomass and abundance is based on the 80 stations. Hence no stations were deeper than 90 m the biomass and abundance has been estimated for depths between 10 and 90 m. The survey area has been stratified in ICES squares and the area between 10 and 90 m has been estimated.

There is at least 5 mile between each station in order to spread out the stations (there are a few stations with lesser distance between, but then there is great difference in the depth).

Trawl and trawling procedure

Both vessels used the same trawl (twin trawl + 1 spare trawl) provided by DTU AQUA. The trawls are checked yearly by a net maker. The fishermen provide the otter boards.

Trawl: Twin "Icelandic-sole-trawl" with 140 mm mesh and rockhopper type ground gear with 150 mm rubber discs.

Mesh size in the cod end: 55 mm stretch mesh

Otter boards: 66" "Thyborøn".

Warp: 13 mm.

The otter boards are mounted directly on the tips of the wings without bridles.

Wing spread (otter board spread) is app. 44 m.

Trawl procedure:

Towing time: Traditionally towing time has been 60 min (towing time down to 20 min is accepted).

In 2016 towing time was reduced to 30 min on 25% of the traditional stations and in 2017 the rowingtime was reduced to 30 on 50% of the stations. Towing time was 30 min on all new stations in Jammerbugt and Storebælt.

Towing speed: 2.5 kn. over the seabed.

Hauls start: when the trawl is considered going stable on the bottom.

Haul end: when hauling starts.

Warp length: The depth varies from station to station and so does the warp length. The warp length was recorded at each station in 2004 and this warp length is used at the station in 2005 and onwards.

Each station is fished in the same direction each year if wind and current allows.

Fishing takes place during night time from app. 5 pm to 7 am.

Handling of the catch

After each haul the catch is sorted by species and weighed to nearest 0.1 kg and the number of specimens recorded. Most fish species are measured as total length (TL) to 1.0 cm below. Norway lobster is measured in mm carapace length.

How will you structure and name your folders and files?

Main folder
- Data
- Data_Documentations
- Data-Managment_Plan
As described in local procedures and guidelines - DTU Aqua
https://www.inside.dtu.dk/-/media/DTU-Inside/Institutter-og-centre/Aqua/Forskning/Research-data-procedures-and-guidelines-DTUAqua.ashx?la=da&hash=5CA3FDF83ADCDD335C389D81F3FDBB2EEFD0A456

How will you handle versioning?

An annual survey report and survey manual is developed and stored in the data folder.

What quality assurance processes will you adopt?

Otoliths readings are calibrated on a triannual basis.
A quality control protocol for all processes should be developed in the future.

Documentation and Metadata

How will you capture / create the metadata?

An annual report is developed and stored in the project folder containing relevant metadata for the data.

Can any of this information be created automatically?

The report is written as part of the annual survey. Presently, data can be downloaded via markdown reporting in a standardized format that are similar to the data format in the ICES database.

What metadata standards will you use?

What metadata, documentation or other supporting material should accompany the data for it to be interpreted correctly?

The annual report.

What information or software needs to be retained to enable the data to be read and interpreted in the future?

All data is uploaded and stored in our own winSQL database, and a report explaining the data available.

Ethics and legal compliance

Have you gained consent for data preservation?

Data is not sensitive, but access is presently restricted to relevant parties.

Have you gained consent for data sharing?

he data belong to DTU aqua, and we are in charge of data sharing.

How will sensitive data be handled to ensure it is stored and transferred securely?

No sensitive data

How will you protect the identity of participants?

No sensitive data

How are copyright and IPR of newly generated data regulated?

No copyright.

If the data is suitable for reuse. How will they be licensed?

To be resolved.

If you are using third-party data, how do the permissions you have been granted affect licensing?

No third-party involved

Will data sharing be postponed / restricted e.g. to seek patents?

No

Storage, backup and security

Where will the data be stored?

Q:\scientific-projects\Tunge-Survey
Data is also stored in the SQL database "FiskeLine"

Do you have access to enough storage or will you need to include charges for additional services?

We have enough data storage for the time being

How will the data be backed up?

DTU is backing the data up on a regular basis

Who will be responsible for backup and recovery?

DTU

How will the data be recovered in the event of an incident?

DTU procedures

What are the risks to data security and how will these be managed?

Database is only accessible through logging in with a password provided by DTU aqua security administrators.

How is security for sensitive data guaranteed?

No sensitive data

How will you control access to keep the data secure?

Password

How will you ensure that collaborators can access your data securely?

Data is sent by email, as per request.

If creating or collecting data in the field, how will you ensure its safe transfer into your main secured systems?

Standard procedure for digitalization of logbooks and samples

Selection, preservation and sharing

What data should be retained?

All data present in the database as well as annual reports

What data must be retained for contractual, legal, or regulatory purposes?

All data can be retained

What data must be destroyed for contractual, legal, or regulatory purposes?

No data

How will you decide what other data to keep?

All input and output data for the survey are to be stored

What are the foreseeable research uses for the data?

The data is the main source for data management and stock assemesment for soles in Kattegat / Skagerak, however data are made available for scientists and can be used for scientific purposes such as closed areas, MPAs fish distribution etc.

Where e.g. in which repository or archive will the data be held?

FiskeLine database

How long will the data be retained and preserved?

For all eternity

Have you estimated in time and effort to prepare the data for sharing / preservation?

Its part of the monitoring standard routines

What is the potential value of long term preservation?

Timeseries

Can you share your data?

- Yes

Which data will be shared and how? Specify where the data and associated metadata, documentation and code are deposited.

Presently data has to be requested at DTU aqua, but in the future data is uploaded in a standard data format which can be downloaded via ICES database

With whom will you share the data, and under what conditions?

When uploaded to datras it will be free for use. Untill then on a case by case decision

Will you share data via a repository, handle requests directly or use another mechanism?

datras database

How will the identity of the person accessing the data be ascertained?

Only people known to us will gain access before it is public available.

Will you pursue getting a persistent identifier for your data?

Presently not, to be resolved

When will you make the data available?

Within a two year period

How will potential users find out about your data (e.g. by adding keywords)?

datras is a well know database to relevant parties

Are there restrictions on data sharing?

- Yes (If yes, please continue)

What action will you take to overcome or minimize restrictions?

DTU AQUA needs to be informed before data is used.

For how long do you need exclusive use of the data?

1 year

Will a data sharing agreement (or equivalent) be required?

No

Responsibilities and Resources

Who is responsible for implementing the DMP, and ensure it is reviewed and revised?

Henrik Degel / Ole Jørgensen

Who will be responsible for each data management activity?

Henrik Degel

How will responsibilities be split across partner sites in collaborative research projects?

Question not answered.

Will data ownership and responsibilities for Research Data Management be part of any consortium agreement or contract agreed between partners?

No

Is additional specialist expertise on Research Data Management (or training for existing staff) required?

No

Do you require hardware or software which is additional or exceptional to existing institutional provision?

No

Will charges be applied by data repositories or archive?

- Yes (If charges are applied, how you are going to cover for the costs?)

In case of special request, there will be a charge in accordance with handling time.