



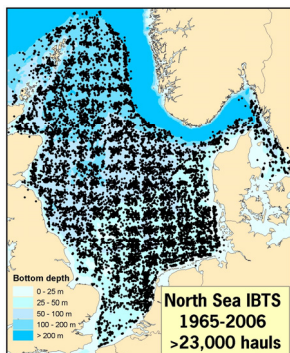
Green light needed for quality check DATRAS; examples from the North Sea IBTS



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DATRAS & North Sea IBTS



The Database TRawl Survey (DATRAS) is managed by ICES and contains data from a number of R.V.-surveys from the eastern Atlantic, amongst which the IBTS.

This International Bottom Trawl Survey has been carried out at least once a year in the North Sea, Skagerrak and Kattegat since 1965. Originally designed to estimate abundance and distribution of juvenile herring, it rapidly evolved to a survey that collects data on finfish in general.

Importance of data quality

The DATRAS data are used in many stock assessments and ecosystem studies that sustain ICES advice.

To ensure quality of DATRAS, a comprehensive checking program is run on the data before being stored. However, certain errors such as typing mistakes or misidentification of species cannot be addressed by data managers, but only by the scientists involved.

Input errors

Errors can be due to careless reporting (e.g. typing mistakes), such as entering unknown codes or undersized species.

unknown record	8831090310
traced back to	
<i>Liparis montagui</i>	8831090831



<i>Mustelus mustulus</i> (smoothhound)		
reported sizes	# fish	size at birth
3, 4, 5, 6, 7, 9, 11, 13 cm	96	35 cm

Inconsistent naming

Reporting on a genus (or family) level when there is only one species (or genus) within the genus (or family) leads to redundant taxa in DATRAS. These have to be corrected for diversity studies.

246 taxa reported	↔	177 species identified
Change higher order	→	Into lower order
<i>Lampetra</i>	→	<i>Lampetra fluviatilis</i> (Lamprey)
<i>Merlucciidae</i>	→	<i>Merluccius merluccius</i> (Hake)
<i>Callionymidae</i>	→	<i>Callionymus</i> (Dragonets)
<i>Solea</i>	→	<i>Solea vulgaris</i> (Sole)
<i>Buglossidium</i>	→	<i>Buglossidium luteum</i> (Solenette)

Misidentification

E.g. *Syngnathus*: Juvenile Greater pipefish ($L_{max}=46\text{cm}$) gets easily mistaken for by Nilsson's pipefish ($L_{max}=17\text{cm}$).



Which = which?



E.g. *Zeugopterus*: Inconsistent recordings of similar species in alternating years by the same country indicate misidentification.



NUMBER OF RECORDS	years	Norwegian topknot	Topknot
Country A	1981-1985	4	.
Country A	1986	.	10
Country A	1987-1998	72	.
Country A	1999	.	46
Country A	2000-2005	6	.

Exceeding Lmax

Each species is characterised by a maximum length (L_{max}). Many records in DATRAS largely exceed the L_{max} reported in the literature.

e.g.	L_{max}	exceeding L_{max}	
		# fish	reported
<i>Amblyraja radiata</i> (Thorny skate)	60 cm	653	Up to 100 cm
<i>Trisopterus esmarki</i> (Norway pout)	25 cm	762	„ 35 cm
<i>Taurulus bubalis</i> (Sea scorpion)	17 cm	1156	„ 31 cm
<i>Callionymus maculatus</i> (Spotted dragonet)	20 cm	141	„ 30 cm

Conclusion



The IBTS data are presently not suited for community analyses without prior treatment of the unlikely or inappropriate records. ICES and contributing institutes have to **detect** and **correct** the existing errors in DATRAS as far as possible, as well as to **prevent** future errors.

Recommendation

Combine forces in a one-off workshop to address DATRAS quality issues with reference to species identification, attended by taxonomists, survey scientists, and data experts.



Examples of topics are:

- Identify and correct taxonomic mis-identifications and input errors.
- Develop protocols for ensuring the appropriate treatment of data reported at higher taxonomic levels.
- Develop improved protocols to ensure that species identification is correct.

