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## 1 BACKGROUND

ICES has been asked to support the reporting of environmental data in an integrated reporting format ensuring that the various scientific requirements for specific data types are covered while allowing standardised reporting of common meta data for these data. The format and underlying quality control procedures are designed to ensure comparable and relevant data for international assessments. The requirements in this document have been specified by various Expert and Assessment groups.

This format provides a common entrance to the ICES database DOME which utilizes a common top level structure based on position and time. The reporting format is Version 3.2.5 of the ICES Environmental Data Reporting Formats.

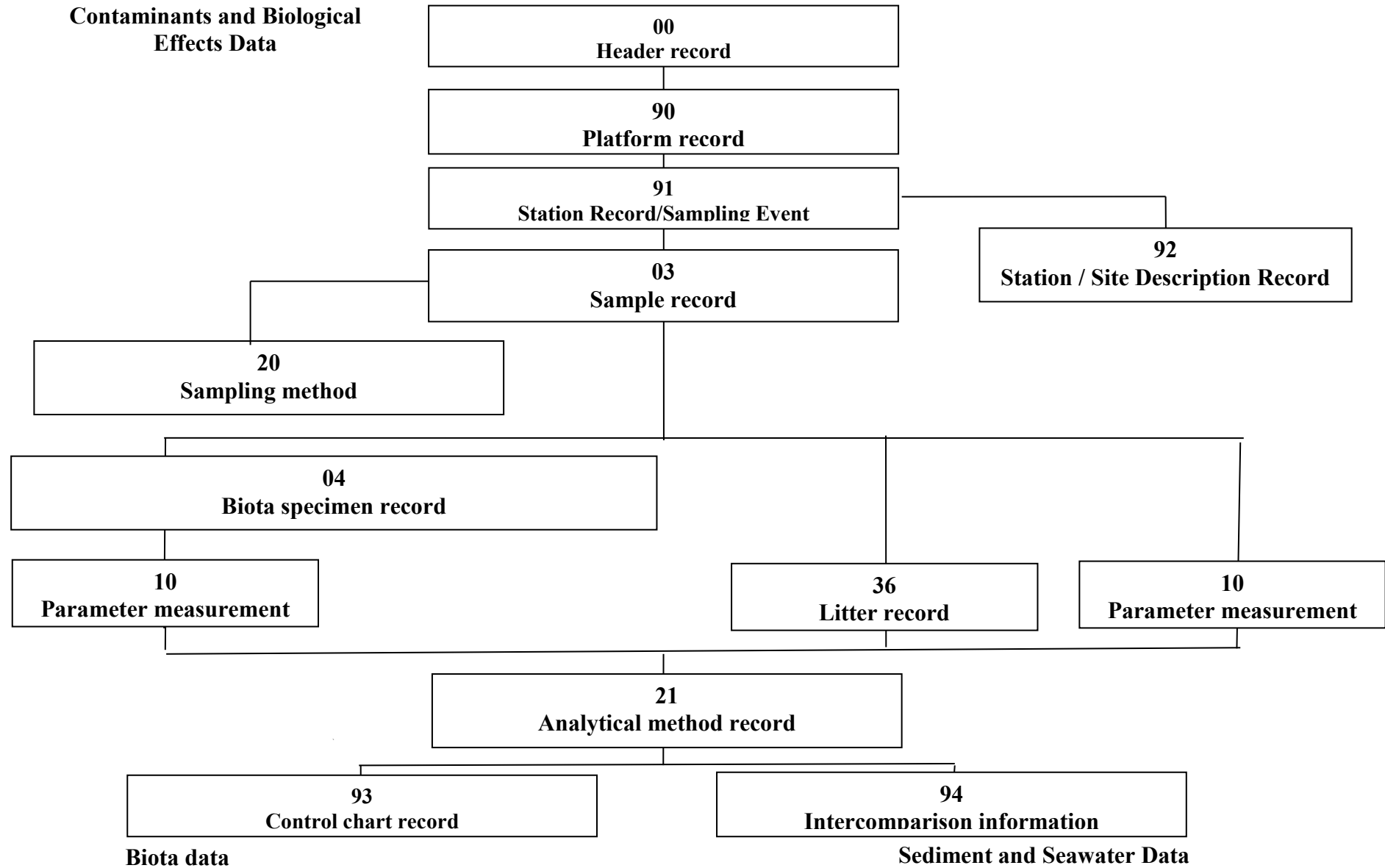
## 2 USING THIS DOCUMENT

### Links to resources:

<a href="https://vocab.ices.dk/">https://vocab.ices.dk/</a>	Reference codes are found here, i.e. valid lookup codes for the reporting format fields
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## 3 HIERARCHICAL STRUCTURE

This format is based on a hierarchical structure which is illustrated in the diagrams below.



**4 FILE INFORMATION**

**RECID 00 FILE INFORMATION RECORD**

File Information Record – mandatory record –				
No	Field Code	Field Name	Valid Value	Mandatory/ Recommended/ Optional
1	RECID	Record identifier	'00'	M
2	RLABO	Reporting institute code	cf. <a href="#">RLABO</a>	M
3	CNTRY	Country code	cf. <a href="#">CNTRY</a>	M
4	MYEAR	Monitoring year	YYYY	M
5	RFVER	Reporting format version number	'3.2.5'	M
6	DCFLG	Data centre flag - Reserved	multiple options possible	

**5 SAMPLING LOCATION RECORDS**

**RECID 90 SAMPLING PLATFORM RECORD**

Sampling Platform Record – mandatory record –				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field Name	Valid Value	Mandatory/ Recommended/ Optional
1	RECID	Record identifier	'90'	M
2	SHIPC	Platform / Ship code	cf. <a href="#">SHIPC</a>	M
3	<b>CRUIS</b>	Cruise identifier (series of sampling occasions) (must be unique for file)	Any character 0–9, A–Z etc.	M
4	Owner	Data owner	Any character 0–9, A–Z etc.	R
5	PRDAT	Public release date	Date YYYYMMDD	R
6	DCFLG	Data centre flag - Reserved	multiple options possible	

**RECID 91 STATION / SAMPLING EVENT RECORD**

Station Record – mandatory record –				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field Name	Valid Value	Mandatory/ Recommended/ Optional
1	RECID	Record identifier	'91'	M
2	<b>CRUIS</b>	Cruise identifier (series of sampling occasions) (must be unique for file)	Any character 0–9, A–Z etc.	M
3	<i>STNNO</i>	Station identification /Sampling event ID (must be unique for CRUIS)	Any character 0–9, A–Z etc.	M
4	LATIT	Latitude (degrees/minutes/decimal minutes or as decimal degrees) Report as WGS84	–90 00.000 to +90 00.000 or -90.0000 to +90.0000 cf. Field Code Descriptions	M

Station Record – mandatory record –				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field Name	Valid Value	Mandatory/Recommended/Optional
5	LONGI	Longitude (degrees/minutes/decimal minutes or as decimal minutes) Report as WGS84	–180 00.000 to +180 00.000 or –180.0000 to +180.0000 cf. Field Code Descriptions	M
6	POSYS	Positioning system	cf. <a href="#">POSYS</a> multiple options possible (separate multiple entries with “~” (ascii 126))	R
7	SDATE	Sampling date	YYYYMMDD	M
8	STIME	Sampling time/start (UTC)	0000–2359 (hhmm)	R Fish disease
9	ETIME	Sampling end time (UTC)	0000–2359 (hhmm) See <a href="#">field description</a> for handling time when sampling continues to the next day.	R Fish disease
10	WADEP	Water depth (sounding in meters)	0–9	rCW, rZB
11	STATN	Station name	cf. <a href="#">STATN</a> Any character 0–9, A–Z etc. (max. 50)	R
12	MPROG	Monitoring programme	cf. <a href="#">MPROG</a> multiple programmes possible (separate multiple entries with “~” (ascii 126))	M
13	WLTYP	Water/land types (river basin/eurotypes)	cf. <a href="#">WLTYP</a>	R
14	MSTAT	Type of monitoring station cf. Eurowaternet Technical report number 97	cf. <a href="#">MSTAT</a> (replaces point source) (separate multiple entries with “~” (ascii 126))	R
15	PURPM	Purpose of monitoring	cf. <a href="#">PURPM</a> (separate multiple entries with “~” (ascii 126))	R
16	EDATE	Sampling end date	YYYYMMDD	mPassive samplers
17	DCFLG	Data centre flag - Reserved	multiple options possible	

## 6 SAMPLE RECORDS

### RECID 03 CONTAMINANT AND BIOLOGICAL EFFECTS SAMPLE RECORD

This sample record is used to group data sampled at one location/time as reported in the sampling event record (91). It is up to the submitter to determine how to group the data (i.e., how many sample records there should be). As a guide, first group according to data type (CF, CS, CW), then according to sampler type (SMTYP).

To reduce the number of sample records needed for biota data (CF), a sample record should be considered to be a haul record (although there is no requirement for this). Decide whether to aggregate according to hauls or not (NOAGG). As a minimum, one sample record will be necessary for each species. If the submitter wishes to organize data according to individual hauls, one sample record can be considered a haul record for all individuals of one species.

Contaminant, biological effects and litter sample record – mandatory record for CF, CS, CW –							
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Data types			Valid value	Mandatory/Recommended/Optional
1	RECID	Record identifier	CF	CS	CW	'03'	M
2	<b>CRUIS</b>	Cruise identifier (series of sampling occasions) (must be unique for file)	CF	CS	CW	Any character 0–9, A–Z etc.	M
3	<b>STNNO</b>	Station identification /Sampling event ID (must be unique for CRUIS)	CF	CS	CW	Any character 0–9, A–Z etc.	M
4	DTYPE	Data type	CF	CS	CW	cf. <a href="#">DTYPE</a>	M
5	<i>SMPNO</i>	Sample identification (for each species in haul, each sediment core, each sediment grab, each water bottle)	CF	CS	CW	Any character 0–9, A–Z etc.	M
6	<b>SMLNK</b>	Sampling method link	CF	CS	CW	1–999	R
7	ATIME	Actual time of sampling (UTC)	CF	CS	CW	0000–2359 (hhmm)	r Tidal waters
8	NOAGG	Number of aggregated samples (hauls, sediment cores or grabs) taken to comprise sample	CF	CS	CW	2–99	
9	SPECI	Species of specimen	CF			cf. <a href="#">WoRMS</a>	mCF
10	RLIST	Reference code list used for species ID	CF			cf. <a href="#">RLIST</a>	mCF
11	FINFL	Factors potentially influencing guideline compliance and interpretation of data	CF	CS	CW	cf. <a href="#">FINFL</a> multiple options possible (separate multiple entries with “~” (ascii 126))	r Fish disease r CF
12	DCFLG	Data centre flag - Reserved	CF	CS	CW	multiple options possible	

**RECID 04 BIOTA SPECIMEN DATA RECORD**

Biota Specimen Data Record – mandatory record for CF –				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field Name	Valid Value	Mandatory/Recommended/Optional
1	RECID	Record identifier	'04'	M
2	<b>CRUIS</b>	Cruise identifier (series of sampling occasions) (must be unique for file)	Any character 0–9, A–Z etc.	M
3	<b>STNNO</b>	Station identification /Sampling event ID (must be unique for CRUIS)	Any character 0–9, A–Z etc.	M
4	<b>SMPNO</b>	Sample identification (for each species in haul, each sediment core, each sediment grab, each water bottle)	Any character 0–9, A–Z etc.	M
5	<i>SUBNO</i>	Sub-sample identification (each fish, egg, bird or aggregate pool of same species. New species – new sample record and SMPNO)	Any character 0–9, A–Z etc.	M
6	NOINP	Number of individuals in sub-sample (i.e. 1 individual or number in pool)	01–99999	M
7	ORGSP	Origin of specimen	cf. <a href="#">ORGSP</a>	r Imposex
8	SEXCO	Sex code	cf. <a href="#">SEXCO</a>	R
9	STAGE	Stage of development	cf. <a href="#">STAGE</a>	R
10	CONES	Condition of specimen	cf. <a href="#">CONES</a>	R
11	ASTSA	Animal state at time of sampling	cf. <a href="#">ASTSA</a>	O
12	NODIS	Number of diseases looked for during a fish disease survey	0–99	r Fish disease
13	BULKID	Bulk identification (for individuals only)	If an individual (or parts thereof) has been analysed in one or more bulks, insert the SUBNO identification(s) of the bulk(s). Note that BULKID can only refer to a SUBNO within the same sample. See <a href="#">field descriptions</a> for an example. (separate multiple entries with “~” (ascii 126))	r Fish disease r Biological effects data
14	DCFLG	Data centre flag - Reserved	multiple options possible	



7 MEASUREMENT RECORDS

RECID 10 PARAMETER MEASUREMENT RECORD

Parameter Measurement Record – mandatory record for CF, CS, CW –										
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Data type						Value	Mandatory/ Recommended/ Optional
1	<b>RECID</b>	Record identifier	CF	CS	CW				'10'	M
2	<b>CRUIS</b>	Cruise identifier (series of sampling occasions) (must be unique for file)	CF	CS	CW				Any character 0–9, A–Z etc.	M
3	<b>STNNO</b>	Station identification /Sampling event ID (must be unique for CRUIS)	CF	CS	CW				Any character 0–9, A–Z etc.	M
4	<b>SMPNO</b>	Sample identification (for each species in haul, each sediment core, each sediment grab, each water bottle)	CF	CS	CW				Any character 0–9, A–Z etc.	M
5	<b>SUBNO</b>	Sub-sample identification (each fish, egg, bird, aggregate, grab portion or core slice)	CF	CS	CW				Any character 0–9, A–Z etc.	mCF mCS
6	<b>MATRX</b>	Matrix analysed	CF	CS	CW				cf. <a href="#">MATRX</a>	M
7	<b>DEPHU</b>	Upper depth/pressure (m) For pressure, see PRFLG in parameter record Upper depth of core slice for sediment.	CF	CS	CW				0–9	R, mCW for most parameters
8	<b>DEPHL</b>	Lower depth/pressure (m) See PRFLG in parameter record		CS	CW				0–9	R, mCW for most parameters
9	<b>PARAM</b>	Parameter code	CF	CS	CW				cf. <a href="#">PARAM</a>	M
10	<b>MUNIT</b>	Measurement	CF	CS	CW				cf. <a href="#">MUNIT</a>	M
11	<b>BASIS</b>	Basis of determination	CF	CS	CW				cf. <a href="#">BASIS</a>	R for chemicals
12	<b>AMLNK</b>	Analytical methods link	CF	CS	CW				1–999	Depends on parameter
13	<b>VFLAG</b>	Validity flag	CF	CS	CW				cf. <a href="#">VFLAG</a> multiple flags possible (separate multiple entries with “~” (ascii 126))	
14	<b>QFLAG</b>	Qualifier flag	CF	CS	CW				cf. <a href="#">QFLAG</a>	
15	<b>VALUE</b>	Value	CF	CS	CW				Any format	M

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Parameter Measurement Record – mandatory record for CF, CS, CW –												
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Data type								Value	Mandatory/Recommended/Optional
16	PERCR	Percentage recovery - to be applied (if thought necessary by data submitter) to the reported value (in VALUE field) at an assessment to give a better approximation of the real value	CF	CS	CW						1–100	O
17	SIGND	Significant digits reported in VALUE	CF	CS	CW						0–9	
18	UNCRT	Uncertainty value	CF	CS	CW						0–9	M (chemicals)
19	METCU	Method of calculating uncertainty	CF	CS	CW						cf. <a href="#">METCU</a>	M
20	DETLI	Limit of detection value	CF	CS	CW						0–9	
21	LMQNT	Limit of quantification	CF	CS	CW						0–9	R
22	PRFLG	Pressure flag			CW						'Y' for Yes or blank	
23	DCFLG	Data centre flag - Reserved	CF	CS	CW						multiple options possible	

**8 METHOD RECORDS**

**RECID 21 ANALYTICAL METHOD RECORD**

Analytical Method Record –mandatory for certain parameters–												
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Data type								Valid value	Mandatory/Recommended/Optional
1	RECID	Record identifier	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	'21'	M
2	<i>AMLNK</i>	Analytical methods link (unique for entire file)	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	01–999 sequential numbering	M
3	ALABO	Analytical laboratory code	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	cf. <a href="#">RLABO</a>	M
4	METDC	Method documentation	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	User defined code to match method document submitted to ICES	
5	REFSK	Reference source or key	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	cf. <a href="#">REFSK</a>	r Fish disease r Biological effects
6	METST	Method of storage	CF	<i>CW</i>	CS	PP	PB	ZP	ZB		cf. <a href="#">METST</a>	
7	METFP	Method of chemical fixation/preservation	CF	<i>CW</i>	CS	PP	PB	ZP	ZB	LT	cf. <a href="#">METFP</a>	

Analytical Method Record –mandatory for certain parameters–												
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Data type								Valid value	Mandatory/ Recommend ed/ Optional
8	METPT	Method of pretreatment	CF	CW	CS	PP	PB	ZP	ZB	LT	cf. <a href="#">METPT</a> multiple flags possible (separate multiple entries with “~” (ascii 126))	
9	METCX	Method of chemical extraction	CF	CW	CS					LT	cf. <a href="#">METCX</a> multiple flags possible (separate multiple entries with “~” (ascii 126))	rCS
10	METPS	Method of purification/separation	CF	CW	CS					LT	cf. <a href="#">METPS</a>	
11	METOA	Method of analysis	CF	CW	CS	PP	PB	ZP	ZB	LT	cf. <a href="#">METOA</a>	R
12	AGDET	Age determination	CF								cf. <a href="#">AGDET</a>	R
		<i>Bioassays</i>										
13	SREFW	Source of reference seawater		CW	CS						cf. <a href="#">SRCWT</a>	rEmbryo Assays
		<i>Live test organism used in bioassay</i>										
14	SPECI	In vivo/In vitro test organism or cell line		CW	CS						cf. <a href="#">VIVIT</a>	rGeneral Quality Assessment Assays
15	RLIST	Reference code list used for species ID		CW	CS						cf. <a href="#">RLIST</a>	
16	ORGSP	Origin of test specimen		CW	CS						cf. <a href="#">ORGSP</a>	rGeneral Quality Assessment Assays
		<i>Information for conversions</i>										
17	SIZRF	Size class reference list				PP		ZP			cf. <a href="#">SIZRF</a>	rPP
18	FORML	Formula used in calculation	CF	CW	CS	PP	PB	ZP	ZB		cf. <a href="#">FORML</a>	
		<i>Information on accreditation</i>										
19	ACCRD	Accredited laboratory for the linked parameter	CF	CW	CS	PP	PB	ZP	ZB		'Y' for Yes or 'N' for No	
20	ACORG	Accrediting organisation	CF	CW	CS	PP	PB	ZP	ZB		cf. <a href="#">ACORG</a>	
21	DCFLG	Data centre flag - Reserved	CF	CW	CS	PP	PB	ZP	ZB	LT	multiple options possible	

## 9 QUALITY ASSURANCE (QA) RECORDS

### RECID 93 REFERENCE MATERIAL RECORD

Quality Assurance – Reference Material – optional record for ICES database / mandatory for certain assessments and Commissions – for example, this record is mandatory for OSPAR for some parameters				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field Name	Valid Value	Mandatory/ Recommended/ Optional
1	RECID	Record ID	'93'	M
2	<b>AMLNK</b>	Analytical methods link – unique number. ALABO information from 21 record, PARAM and MATRX from 10 record	1–999	M
3	<i>QALNK</i>	QA information link	1–99	M
4	CONCH	Type of reference material	cf. <a href="#">CONCH</a>	M
5	CRMCO	Reference material code	cf. <a href="#">CRMCO</a>	M
6	CRMMB	Reference material – basis of determination used in control chart analysis <i>Note: The same basis should be used as that of the reference material to allow comparison.</i>	cf. <a href="#">BASIS</a>	
7	CRMMV	Reference material mean value found – value	0–9 Any format	
8	MUNIT	Measurement unit	cf. <a href="#">MUNIT</a>	
9	CRMSD	Reference material's standard deviation - standard deviation	0–9 Any format	
10	CRMNM	Control chart – number of measurements	0–9	
11	CRMPE	Control chart – period in weeks	0–9	
12	DCFLG	Data centre flag - Reserved	multiple options possible	

### RECID 94 INTERCOMPARISON RECORD

Quality Assurance – Intercomparison Participation Quality Assurance – optional record for ICES database / mandatory for certain assessments –				
No	Field Code <i>Foreign key in bold, primary key in italics</i>	Field name	Valid values	Mandatory/ Recommended/ Optional
1	RECID	Record identifier	'94'	M
2	<b>AMLNK</b>	Analytical methods link	1–999 sequential numbering according to ALABO	M
3	<i>ICLNK</i>	Intercomparison link	1–99	M
4	ICCOD	Intercomparison exercise code	cf. <a href="#">ICCOD</a>	M
5	ICLAB	Intercomparison: lab participation code – can be ALABO	cf. <a href="#">RLABO</a> or any character 0–9, A–Z etc.	
6	DCFLG	Data centre flag - Reserved	multiple options possible	

