Technical Report on the National Data Collection Programme under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2010/93/EU Estonia 2012

Tallinn 31.05.2013

Contents

I. General framework

This document describes the results of the Estonian National Program for collection of data in the fisheries sector in 2012. The program has been developed and performed in accordance with the rules laid down in relevant Commission and Council regulations (Council Regulation (EC) No. 199/2008, Commisssion regulation (EC) No. 655/2008 and Commission Decision No. 2010/93/EC), and STECF comments on the proposals of earlier years.

Estonia joined the DCR in 2005, and there have been no major changes in approach compared to the years before.

The year 2012 is covered by the Technical Report.

List of derogations:

Short title of derogation	NP proposal section	Type of data - Variables	Region	Derogation approved or rejected	Year of approval or rejection	Reason / Justification for derogation

II. National data collection organisation

II.A National correspondent and participating institutes

The programme will be conducted in close cooperation between:

- **Estonian Marine Institute, University of Tartu (EMI)**

Estonian Marine Institute, University of Tartu, is a Public Research Institution that carries out research, investigations and provides advice concerning sustainable exploitation of live marine and fresh water resources. It has experience in fisheries management and economics, as well as in mathematical modelling. Institute has an agreement with the Ministry of the Environment to conduct applied fisheries research in Estonia, and is responsible for the main part of the National Data Collection Programme in 2011-2013.

- **Estonian Ministry of the Environment (EME)**

Estonian Ministry of the Environment is responsible for regulating the questions concerning the protection of marine nature and environment, as well as for solving the tasks concerning the use of marine resources. The Fish Resources Department, established in 2001 to replace the Fisheries Board and the Fisheries Department, manages and co-ordinates research, assessment, exploitation, reproduction and protection of fish resources.

- **Estonian Ministry of Agriculture (EMA)**

As of March 2001, the fisheries matters are divided between two ministries: the Ministry of the Environment and Ministry of Agriculture. Fishing Economics Department of the latter deals with issues of pisciculture, production, processing and marketing of fish and fish products, structural fishing policy. Since 1 January 2006, EMA holds the Estonian Fisheries Information System of commercial fishery.

Estonian Ministry of the Environment is acting as coordinator for the Estonian Programme. The participating institute will be treated as a partner.

National correspondent

Estonia has assigned the Estonian Ministry of the Environment as the National Correspondent. Contact person is:

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The data collection problems in 2012 were discussed in close cooperation with EMI as main executor of the Estonian National Programme and special coordination meeting was held in the beginning of November. The main discussion objects were Estonian National Programme in 2014-2020, problems raised in 2012 and outlook for the program in 2013. As a main outcome of the meeting some possible solutions for the problem of effort data (see paragraph III.F.2) are worked out. Ideas are communicated for further discussions and possible implementation.

The next National coordination meeting is planned in 2013 during the III or IV quarter.

According to the Commission Regulation 665//2008 article 8(2) all data collected under the Estonian National Data Collecton Programme are stored one central website (see module VI).

II.B Regional and International coordination

II.B.1 Attendance of international meetings

See standard table II.B.1. Both RCM Baltic and RCM North Sea and Eastern Arctic were attended. NAFO areas were moved from RCM North Atlantic to the RCM North Sea and Eastern Arctic in 2009. Originally, the relevant areas for the RCM North Sea and Eastern Arctic (RCM NS&EA) are ICES Sub-areas I, II, IV and ICES Divisions IIIa and VIId, from 2009 onwards ICES Sub-areas XII, XIV, ICES Division Va and the NAFO areas also are included in RCM NS&EA.

II.B.2 Follow-up of regional and international recommendations

LIAISON MEETING (LM)

Recommendation	Follow-up
LM would like to recall that MS participation in the relevant RCMs is mandatory. **(2010)**	Estonian representatives participate at all relevant RCM meetings.
Economists from all MS should attend the RCM on Supra regional level. **(2009, 2010)**	Persons dealing with economic issues have participated in relevant meetings
LM recommend MS to use COST tools and encourage MS to report on the implementation of these tools in analyzing their data. **(2010)**	This tool is used.
In order to ensure possibilities for adequate sampling of biological and métier related data including landings in foreign MS, national institutes need to have online access to national logbook data and national VMS data. **(2011)**	Access is granted for national institute.
Concerning Métier related variables: Recreational fisheries; MS are requested to submit the recreational fishery available data (total removals; any biological data) to the next meeting of WGBFAS, WGBAST and WGEEL in 2012. ICES WGBFAS, WGBAST and WGEEL are asked to consider the usefulness of inclusion the recreational fishery data into the stock assessment. **(2011)**	In case of appropriate data calls recreational data are submitted.
LM recommends regular meetings of staff involved in implementing the Control Regulation and DCF to avoid duplication of work as far aspossible. In the longer term, the corresponding regulations will have to be brought in line in order to prevent duplication of data collection work.	Special meetings are not held. Control Regulation and DCF requirements are taken into account when appropriate national regulations are set up.

RCM NS&EA

Recommendation	Follow-up
RCM NS&EA considers that, in a situation where sampling resources are limited, priority should be given to the sampling of discards in those metiers with high discarding. In order to be able to allocate and prioritize sampling effort to observer programmes at sea or self sampling programmes for estimating discards, preliminary information is required on discarding by metier where it is available. The information required is an estimate of the level of discarding (volume and percentage) and the main species contributing to the discard fraction of the catch. **(RCM NS&EA 2010 Recommendation)**	Available discard data was presented in data call responses.
The RCM NS&EA recommends that the task sharing species are investigating by MS participating in current age reading programs and decide whether task sharing is desirable or possible for the future. **(RCM NS&EA 2011 Recommendation)**	Task sharing for reading otoliths for Atlantic species was discussed and it was not possible to manage the problem at the moment.
RCM NA recommends MS to carefully draft their NP proposal for the years 2012 and 2013 in order to anticipate any changes/modifications of their programme and dedicated budget. (**RCM NA 2009 Recommendation**)	Included in NP proposal for 2011-2013
In compiling the National Programmes 2011-2013, MS should ensure that the information provided in describing the metiers to be sampled relates directly to the information provided to the RCM NA in the metier section. (**RCM NA 2009 Recommendation**)	Included in NP proposal for 2011-2013
RCM NA recommends MS to prepare their NP Proposal 2011-2013 on recreational fisheries based on the DCF requirements, using their own knowledge of the fisheries, without waiting for the outcomes of the PGRFS. RCM NA recommends also MS to consider the recommendations of the ICES WGEEL. (**RCM NA 2009 Recommendation**)	Included in NP proposal for 2011-2013
National Programmes to include appropriate reference to RCM NA report in relation to sampling agreement at metier level. National Programmes to include in annex formal bilateral agreements, using the template in annex XI. (**RCM NA 2009 Recommendation**)	No such agreements

Métier related variables: Routines for establishing bilateral agreements. MS should make sure that their landings abroad are included in the Regional Database upload allowing the RCM to analyse the possible needs for bilateral agreements. (RCM NA 2011 Recommendation)	Implemented

RCM BALTIC

Recommendation	Follow-up
2010 Landing -, effort – and landing value statistics should be uploaded in Fish- Frame. (**RCM Baltic 2010 Recommendation**)	Available data is uploaded to FishFrame.
Compile 1-page status report of ongoing recreational fisheries surveys. Upload required document to the sharepoint: RCMs 2010 > RCM Baltic > Data > Recreational fisheries (**RCM Baltic 2010 Recommendation**)	Required document is uploaded.
For institutes collecting small volumes of otoliths for certain species and when new species are to be sampled, task sharing of age reading is necessary in order to optimise the use of age reading expertise. The RCM Baltic recommends that the NC´s starts to discuss, decide and agree on which MS should be responsible for age reading of species rarely caught in BITS survey (brill, plaice, turbot, dab, sole). An agreement of task sharing for aging eel should also be established. (**RCM Baltic 2010 Recommendation**)	Estonia supports this idea, but species listed here are not targeted by the Estonian fleet (except for turbot). No such agreements between Estonia and other MS so far.
RCM Baltic 2009 endorses the recommendation from RCM NS &EA: For the purposes of regional understanding of sampling activities, National information on sampling should be compiled regionally in advance of the next meeting. To enable this, participants from MS should strictly respect the agreed naming conventions of fishing ground and métiers as well as the deadline for submission of the data. The Chair is responsible for requesting the data and compiling it on a regional level (**RCM Baltic 2009 recommendation**)	Followed by Estonia

RCM Baltic 2009 endorses the recommendation from RCM NS &EA: For the purposes of understanding the heterogeneity of métiers and the consequences for task sharing and discard sampling, national descriptions of the regionally ranked métiers should be compiled using the format in annex 3. To enable this, participants from the MS should strictly respect the agreed naming conventions of fishing ground and métiers as well as the deadline for submission of the information. Appointed persons are responsible for requesting the data and compiling it on a regional level (**RCM Baltic 2009 recommendation**)	Implemented.
In order to make analyses of the data collected within DCF and to optimise the coordination work, the developed regional database FishFrame 5.0 should be used within the RCM Baltic. (**RCM Baltic 2009 recommendation**)	Implemented.
WGBAST recommends that the proportion of adipose fin clipped salmon in Baltic salmon fisheries should be monitored in conjunction with DCR or other data collection programmes.	Implemented for commercial fishery.
Member states are recommended to seek for task sharing when starting ageing new species. (**RCM Baltic 2008 Recommendation**)	Approved but not implemented. No specialists for ageing eg redfish, Greenland halibut in Estonia, and samples are available for analyses in interested laboratories/MS-s

III. Module of the evaluation of the fishing sector

III.A General description of the fishing sector

No major changes as compared to NP Proposal for 2009-2010.

The Estonian fleet operates regularly in 2 regions:

1. Baltic Sea, fishing ground SD 25-32 (occasionally SD 22-24);
2. North Sea and Eastern Arctic, mostly fishing grounds of the NAFO Regulatory Area. Irregular fishery is conducted in fishing grounds I and II, and more occasionally in other regions.

Sampling programme can be designed for areas where the fleet operates regularly, namely, Baltic region, fishing ground 25-32, and NAFO.

Fishery in NAFO area was at a very low level in 2011 (only 4 fishing trips, 2 for finfish in 3LMN and 2 for shrimp in 3L).

National fishery is described in Table III.A.1.

III.B Economic variables

Supra region: Baltic Sea (ICES areas III b-d), North Sea (ICES areas IIIa, IV and VIId) and Eastern Arctic (ICES areas I and II), and North Atlantic (ICES areas V-XIV and NAFO areas).

III.B.1 Achievements: Results and deviation from NP proposal

Types of data collection for each fleet segment and for each economic variable are described in standard tables III.B.1 and III.B.3.

The data concerning economic variables were collected as listed and defined in Appendix VI of Commission Decision 2008/949/EC. For economic variables included in Estonian Fisheries Information System (EFIS) (includes log book data, fishing vessel register) data were collected about all members of the population (census type of data collection). For other economic variables questionnaires were sent out. It is important to mention that all these surveys have been carried out on a voluntary basis.

There was a deviation from NP proposal. Instead of probability sample survey census type of data collection scheme was decided to use in the case of trawlers. Previous practice showed quite low response rate for enquiries. Due to the above reason and low population sizes, questionnaires were sent for each vessel. In these populations the use of census type of data collection scheme is more justified instead of probability sample survey to achieve better results – to ensure the greatest possible number of responses. In the case of vessel using passive gears (coastal fishery) probability sample survey was used like planned.

Clustering of fleet segments. Standard Table III.B.2 reports the segments that have been clustered. Estonia has two clustered fleet segments - Pelagic trawlers 12-<18m and Pelagic trawlers 24-<40m (table III.B.2). In both cases the segments added (Demersal trawlers: 12-<18m and Demersal trawlers: 24-<40m, respectively) were with similar characteristics (length classes, capacity figures) and were merged for confidentiality reasons. Clusters were named after the biggest segment in terms of number of vessels.

Estimation of capital value and capital cost. The capital value and capital costs were estimated using the proposed Perpetual Inventory Method (PIM) according to the study *Evaluation of the capital value, investments and capital costs in the fisheries sector* (Study No FISH/2005/03, IREPA Onlus Coordinator, 2006). PIM generates an estimate of the capital stock by accumulating past purchases of assets over their estimated service lives.

III.B.2 Data quality: Results and deviation from NP proposal

Accuracy indicators and the values of them are presented in standard table III.B.3. Response rates were used as accuracy indicator for census type of data collection. In case of probability sample survey achieved sampling rates were used. The coefficient of variation (CV) of total estimates was calculated according to SGECA-09-02 report. In the case of census with <70% response rate CV of observed values (in column Other variability indicators) was calculated.

FTE national and FTE harmonised calculated according to the methodology presented in Study No FISH/2005/14. For the calculation of national FTE, the number of hours worked during the year collected from the enterprises. The working hours of employee was 1871 hours per year in 2011. The harmonised reference level for FTE working hours were set to 2000 hours in accordance with the Appendix VI of Commission Decision 2008/949/EC.

Due to the changes in data collection scheme there was deviation from NP proposal. Instead of probability sample survey census type of data collection scheme was decided to use in the case of trawlers. Previous practice showed quite low response rate for enquiries. Due to the above reason and low population sizes, questionnaires were sent for each vessel. In these populations the use of census type of data collection scheme is more justified instead of probability sample survey to achieve better results – to ensure the greatest possible number of responses. In the case of vessel using passive gears (coastal fishery) probability sample survey was used like planned.

III.B.3 Follow-up of Regional and international recommendations

- *In particular, **STECF (PLEN-09-02) recommends** that MS indicate the data collection category that is to be applied for each fleet segment and for each economic variable as listed in Appendix VI of Council Decision 949/08. SGECA 09-02 identified three different categories of data collection scheme that covers all the possible typologies of data collection:*

- *Census, which attempts to collect data from all members of a population.*
- *Probability Sample Survey, in which data are collected from a sample of a population members randomly selected*

- *Non-Probability Sample Survey, in which data are collected from a sample of population members not randomly selected.*

STECF notes that this classification will facilitate the comparison of survey methodologies among Member States (MS).

- . ***STECF also recommends*** *that MS adhere to the guidelines for the preparation of the methodological report given in the Table 4.1.1 (adapted from the report of the STECF-SGECA 09-02).*
- *include in their annual Technical Reports, the data quality indicators given in the Table 4.2.2 (discussed under TOR 2 of STECF-SGECA 09-02).*

- Regarding the clustering issue, SGECA-09-02 considered that approaches to clustering should depend on the particular characteristics of fleet segments. The group proposed that MS should distinguish between segments considered for clustering as follows: 1. important segments with distinct characteristics, 2. segments similar to other segments, 3. nonimportant segments with distinct characteristics. ***SGECA-09-02 recommends*** *a set of guidelines for clustering for each of these three cases.*

- Due to concerns raised over the implications for data time series if clustering practices change over time, ***SGECA-09-02 recommends*** *MS to take this into account when they segment the fleet in order to produce consistent time series over time.*

Estonia has been taken into account these recommendations.

III.B.4 Actions to avoid shortfalls

As surveys carry out on a voluntary basis continuous clarification about importance of data collection among target group should be one possible way to maintain or even enhance response rates.

III.C Metier-related variables

Baltic Sea (ICES areas III b-d)

III.C.1 Achievements: Results and deviation from NP proposal

See standard tables III.C.3, III.C.4, III.C.5 and III.C.6 with the information collected during the sampling year 2012.

In general, métier sampling intensity in 2012 corresponded to the plan.

GNS_DEF_>=36_0_0 (concurrent-at-sea) was undersampled due to limited possibilities to send researchers to the sea on board of small boats used in this fishery. Accordingly, port other of landings was introduced to keep the total number of trips.

OTM_SPF_16-104_0_0 was oversampled, as observers on board (registering incidental bycatch of cetaceans) were trained to sample herring and sprat. The sampling intensity of that métier was higher also for assessment purposes (need for comprehensive input information for ICES assessment working group). This oversampling did not increase the costs of sampling in frames of DCR as significant amount of data were collected using other funds.

Over- and undersampling of several species for length composition (Table III.C.5) is related to the catch rate of these species, which varies annually and is hard to prognosticate. This table includes data collected by the Estonian Marine Institute, including surveys and test fishing.

Commercial catches of *Salmo salar, Anguilla anguilla, Psetta maxima, Coregonus lavaretus* were low, and usually a few specimens (if any) could be sampled during a trip. The number of eels we could analyse was very low due to extremely low catch rate.

Several species were oversampled in 2012. It should be stressed that this did not increase costs of sampling from funds of the project of data collection. On the contrary, costs from this project were lower than in earlier years, due to the insufficient level of national funding. Oversampling was achieved due to the incorporation of data collected in frames of projects funded from other sources.

Most data for *Salmo salar* and *Salmo trutta* originate from test fishing in rivers. *Sander lucioperca* could be sampled only in Pärnu Bay, in other areas along the Estonian coast only a few specimens were registered in the catch.

Significant oversampling of*, Platichtys flesus, Perca fluviatilis, Clupea harengus* and *Sprattus sprattus* was due to higher CPUE than expected, especially in test fishing catches (all individuals are analyzed in test fishing catches), as well as (in case of herring and sprat) due to incorporation of data collected by on-

board cetacean observers. The number of sampled cod was higher than planned as we had a possibility to send an observer on board of the vessel fishing outside the Estonian EEZ (western Baltic).

III.C.2 Data quality: Results and deviation from NP proposal

Precision estimates were calculated as the weighted average of CVs overall length/age classes. The weight was the total estimated number of individuals per length/age classes.

For some species (eg eel), compiled data of several MS could achieve the target. For local species (eg pike) where analytical assessment has not been used and can probably not be used in future, Estonia follows the stock situation using test-fishing data (CPUE, age/length distribution) for advice.

III.C.3 Follow-up of Regional and international recommendations

Recommendation	Follow-up
In the NP proposals, a short description of all métiers selected by the 90% ranking procedure should be provided. Such a table would enable RCM to identify whether a métier with the same name covers the same or different fisheries in different NPs. (**RCM Baltic 2008 Recommendation)**	Included in NP proposal for 2010
The Working Group noted that despite all of the observations made under EC Regulation 812/2004, there is little mention in national reports of any **seal bycatch,** and recommends to the European Commission that bycatches of seals and other protected species should be reported by observer programmes established under the 812/2004 regulation as well as those conducted under Data Collection Regulations for discard sampling. (**WGMME**)	Data are collected, but not in frames of DCR

III.C.4 Actions to avoid shortfalls

For local species currently at low stock level, other methods than analyses of commercial catches should be accepted by the Commission to follow the stock status. In Estonia, these coastal stocks are monitored in frames of regular (since 1993) test fishing in fixed sampling areas along the Estonian coastal zone. CPUE, year class strength and other parameters indicating the stock status can be calculated from these test fishing data.

North Atlantic (ICES areas V-XIV and NAFO areas)

III.C.1 Achievements: Results and deviation from NP proposal

See standard tables III.C.3, III.C.4, III.C.5 and III.C.6 with the information collected during the sampling year.

Metier sampling was less than planned due to limited fishing activities of the Estonian fleet in NAFO area in 2012, mostly due to the collapse of shrimp fishery in 3M.

Estonian catches in the North Atlantic consist only a few species listed in Tables. In the case of shrimp fishery, volume of discarded (damaged) shrimp is registered by observers (discarding is very low), but discarded shrimps cannot be analyzed due to their poor condition.

In case of *Reinhardtius hippoglossoides, Gadus morhua*, unsorted catches are analyzed by observers (see text table in section III.E.1 for details). Bycatch is registered by species and volume, but bycatch is too low to get significant samples for length, weight, age, sexual composition measurements, except for *Sebastes* bycatch in shrimp fishery (Table III.C.5).

III.C.2 Data quality: Results and deviation from NP proposal

See table III.C.5 with the values of the accuracy indicators (CV).

In case of species which were sampled in low numbers (primarily due to low stock abundance), accuracy indicators achieved nationally did not meet the requirements of DCF.

III.C.3 Follow-up of Regional and international recommendations

Recommendation	Follow-up
The RCM-NA recommends that all MS should follow strictly the naming conventions for reporting the sampling and statistics information. To that aim, MS are invited to investigate closely on the mesh size range actually used. (RCM-NA 2008 Recommendation)	Used mesh sizes checked in métiers.
In the NP proposals, a short description of all métiers selected by the 90% ranking procedure should be provided. Such a table would enable RCM to identify whether a métier with the same name covers the same or different fisheries in different NP. (RCM-NA 2008 Recommendation)	Included in NP proposal for 2010

III.C.4 Actions to avoid shortfalls

Data collection in the North Atlantic is dependent on fishing activities of the Estonian fleet in this region, and on coverage rate of fishing trips by observers. Fishery is declining, and sampling in this region will probably decrease in the coming years. Only the most qualified observers will continue their duties, and this will probably improve the data quality.

III.D Recreational fisheries

Baltic Sea (ICES areas III b-d)

There is no recreational fishery in other areas than the Baltic Sea.

III.D.1 Achievements: Results and deviation from NP proposal

Recreational fishing in Estonia can be devided as:

1) Hobby fishing (*e.g.* general angling and underwater spear fishing) without special license.

2) Fishing on the basis of special fishing license (*e.g.* fishing with gears like gill net, longline or salmon and sea trout rod fishing in rivers). Providing catch data is obligatory in licensed fishing.

Data for licensed fishery (gill net fishery, salmon fishery in rivers, longline fishery etc) are collected by using census type of data collection. Additionally the study of hobby fishing catches (includes angling and underwater spear fishing) of the species listed in annex IV, for other species (locally important species), as well as fishermen preferences and other relevant characteristics of the sector is performed for 2010 (see 2011 report). All planned activities described in Estonian National Programme (as requested updated program with precise methodology and activities of study are sent to the European Commission in 2nd June 2011) are fulfilled and necessary activities are implemented to estimate total catches of recreational fishery.

For licensed fishery it is mandatory to report the catches (length and weight of fish) since 2005. The data for salmon, eel, cod and other species are available in EFIS. The amount and proportion of licensed fisheries catches compared to Estonian total catches are described in table below.

Species	Catch in 2012, t			Recreational, % of total catch						
	Commercial	Recreational	Total	**2012**	2011	2010	2009	2008	2007	2006
Cod	692,412	0,589	693,001	**0,1**	0,1	0,1	0,1	0,1	0	0

Eel (catches at sea)	1,908	0,015	1,923	**0,8**	2,8	3,9	2,5	3,9	3,3	2,5
Eel (catches of inland waters)	15,202	0,597	15,799	**3,8**	6,4	6,8	7,9	3,5	3,2	3,4
Salmon *	8,255	3,452	11,707	**29,5**	47,2	46,3	41,4	35,7	32,6	18,9
Sea trout *	17,281	4,388	21,669	**20,3**	25,6	25,1	21	19,2	16,2	17,4
Flounder	212,891	33,639	246,53	**13,6**	15,4	16,4	16,8	14,1	12,8	12,2
Baltic herring	13788,56	2,079	13790,64	**0,0**	0	0	0	0	0	0
Sprat	27697,27	0,013	27697,28	**0,0**	0	0	0	0	0	0
Whitefish	20,428	4,289	24,717	**17,4**	23,8	21,5	18,4	19	17,4	18,3
Pike	35,407	4,453	39,86	**11,2**	10,2	9,3	10,8	14,7	9	6,9
Pikeperch	146,817	0,951	147,768	**0,6**	0,7	0,9	0,8	1,3	1,3	0,8
Perch	549,779	8,596	558,375	**1,5**	1,7	1,4	1,2	2,2	1,4	1,1

includes river recreational catches of salmon and sea trout

The proportion of licensed fisheries catches of total catches by species was, in most cases, slightly lower than in 2011, the highest in case of salmon (29,5%; contains the catches in rivers) followed by sea trout (20,3%; contains the catches in rivers), whitefish (17,4%), flounder (13,6%), pike (11,2%) and other species (< 10%). There was a significant (>30%) decrease of recreational catch for perch and flounder.

III.D.2 Data quality: Results and deviation from NP proposal

All recreational fishery is covered by catch estimate. Fishing card fisheries catch data for cod, salmon and eel in Table (above) should be considered as exhaustive. Catches of hobby fishery were marginal in 2011 and should be considered as irrelevant. Next study to investigate chances in hobby fisheries catches is planned in 2013 to survey catches of 2012.

Length, weight and age composition of fishing card fisheries catches was not studied in 2012 (except for salmon and sea trout), due to low volumes of catches and financial restrictions.

No deviations asked.

III.D.3 Follow-up of Regional and international recommendations

Recommendation	Follow-up
The Baltic RCM recommends to further investigate the amount and variability of recreational fisher's catch of Baltic cod, with the aim to include these catches as soon as possible in the assessment and management advice. (RCM Baltic 2007 Recommendations)	Implemented.
WGBAST recommends that the proportion of adipose fin clipped salmon in Baltic salmon fisheries should be monitored in conjunction with DCR or other data collection programmes.	Implemented for commercial fishery.
MS is requested to submit the recreational fishery available data (total removals, any biological data) to the next meeting of WGBFAS, WGBAST and WGEEL in 2012. (RCM Baltic 2011 Recommendation)	Data are available for use.
PGCCDBS recommends that reporting of Baltic salmon catch estimates from recreational fisheries on a yearly basis, and for commercial on half year basis, is sufficient (ref. WGBAST 2010 requesting a revision of the DCF Decision 2010/93/EU).	Catch data of salmon recreational fishery are available for licensed fishery on yearly bases (should be considered as exhaustive) and for hobby fishery in sea over the year.

III.D.4 Actions to avoid shortfalls

No need.

Next study of hobby fishery will be conducted in 2013.

III.E Stock-related variables

Baltic Sea (ICES areas III b-d)

III.E.1 Achievements: Results and deviation from NP proposal

Table III.E.3 contains the information collected during the sampling year.

In the case of pikeperch and whitefish, sampling was close to the planned level. A remarkable proportion of pikeperch data comes from experimental trawling we reintroduced in Pärnu Bay in 2011.

In several cases, the achieved data collection was different compared to what was planned in the NP proposal. Most of stocks were oversampled, but this is due to incorporation data from various (national) financing sources (projects). Actual expenses for sampling in 2012 from the Data Collection Project were lower than in earlier years due to financial restrictions of this project.

Parameters for herring and sprat (especially length-weight) were oversampled due to incorporation of data obtained by onboard cetacean observers (also see III.C.1).

Cod was oversampled due to recent stock increase and due to the possibility to send observers on board of trawlers fishing in the southern part of the Baltic Sea (outside the Estonian EEZ). Our sampling protocol prescribes to analyze all demersal fish in the catch of most gears. Sampling rate (trip No) was kept high due to problems with getting samples of several other species.

Perch, flounder, whitefish, burbot (especially length-weight) were oversampled due to the incorporation of data from all available projects (different financing sources).

Rivers with the local populations of *Salmo salar* and *Salmo trutta* were sampled at a higher rate than originally planned due to projects financed from other sources.

Some species were under-sampled as in previous years: salmon (commercial catches), and eel (from West-Estonian Basin District). There is directed fishery only for eel, but catches are extremely low due to

stock situation. Additional obstacle was lack of money to purchase fish for sampling as all these species are of high commercial value and prices are high.

Data of eel were collected also from Narva River Basin District. Oversampling from planned sampling rate was necessary to make appropriate statistical assessment for eel stock in the biggest river basin and eel management unit in Estonia.

III.E.2 Data quality: Results and deviation from NP proposal

Values of the accuracy indicators will be calculated in an international level, as (in most cases) national samples are too small to get accurate estimates.

III.E.3 Follow-up of Regional and international recommendations

Recommendation	Follow-up
Member states are recommended to seek for task sharing when starting ageing new species (**RCM Baltic 2008 Recommendation)**	Approved but not implemented. No specialists for ageing eg redfish, Greenland halibut in Estonia, and samples are available for analyses in interested laboratories/MS-s

III.E.4 Actions to avoid shortfalls

Better planning of NP proposal is needed in future. Increase of national funding will allow to get bigger samples of valuable commercial species which stock is at a low level.

North Atlantic

III.E.1 Achievements: Results and deviation from NP proposal

Table III.E.3 contains the information collected during the sampling year.

Estonian shrimp fishery in the NAFO area decreased significantly in 2010 and only 3 trips were performed to NAFO area (3L) to catch shrimp in 2012. Observers were on board during the trips and took unsorted samples of shrimp, at the same frequency as in previous years, but the total number of analyzed shrimp was much lower than originally planned (planning was done during extensive shrimp fishery in 3M). Juvenile redfish (as a bycatch in shrimp fishery) was also sampled in 2012.

Only 2 trip was performed to catch finfish during 2012 in NAFO. The target species was Greenland halibut, and this species was sampled for length, weight, age, and sex.

III.E.2 Data quality: Results and deviation from NP proposal

Planning and quality ensuring are rather complicated in the case of the Estonian distant fishery as fishing possibilities are much lower than earlier (due to moratorium on shrimp fishery in 3M) and as we use trained observers in data collection. All data are transferred to the NAFO Scientific Council which assesses the quality of data internationally.

Unsorted catches were sampled. No discard or bycatch sampling was performed, as discarding and bycatch (regulated species) were at very low level (eg discarding in shrimp fishery – 0,014% by weight).

III.E.3 Follow-up of Regional and international recommendations

Recommendation	Follow-up
The RCM-NA recommends that all MS should follow strictly the naming conventions for reporting the sampling and statistics information. To that aim, MS are invited to investigate closely on the mesh size range actually used. (RCM-NA 2008 Recommendation)	Used mesh sizes checked in métiers.
In the NP proposals, a short description of all métiers selected by the 90% ranking procedure	Included in NP proposal for 2010

should be provided. Such a table would enable RCM to identify whether a métier with the same name covers the same or different fisheries in different NP. (RCM-NA 2008 Recommendation)	

III.E.4 Actions to avoid shortfalls

Observers (engaged in sampling in NAFO area) need permanent training for maturity estimation of shrimp and fish, as well as for identification of (rare) bycatch species. This training will be included as a routine before every trip.

III.F Transversal variables

The main data source is EFIS. It contains data from logbooks, landing declarations, sales notes and fleet register. For commercial fishery the Ministry of Agriculture and for recreational fishery the Ministry of the Environment manages the data. VMS data are available from FMC administered by Environmental Inspectorate.

III.F.1 Capacity

III.F.1.1 Achievements: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year.

Data collection was exhaustive.

All the relevant information was obtained from Estonian Fisheries Information System (EFIS), which also includes the Fishing Vessel Register. All Estonian fishing vessels with the right to undertake commercial

fishery are registered in the Fishing Vessel Register. The Fishing Vessels Register includes all the information concerning the vessel:

- Vessel type e.g. trawler;
- Age of the hull;
- Dimensions of the vessel; GT, length;
- Engine power;
- Vessel owner.

III.F.1.2 Data quality: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year.

III.F.1.3 Actions to avoid shortfalls

None.

III.F.2 Effort

III.F.2.1 Achievements: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year.

Effort data (days at sea, fishing days, number of trips) are based on data obtained from the Estonian Fisheries Information System (EFIS). It includes all necessary data for trawlers where vessels with length of more than 12 meters are used and therefore the Community logbook is utilized but for coastal fishery (small vessels mostly with length below 12 meters using passive gears) the data are recorded in national logbooks and therefore above mentioned data are not electronically recorded in the EFIS.
The problem has been noted and in order to improve the situation we have to consider how our system for collecting the data on vessels with length less than 12 meters can be improved.

Data collection was exhaustive for vessels with length of more than 12 meters**.**

III.F.2.2 Data quality: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year. Effort data (days at sea, fishing days, number of trips) for coastal fishery were not presented.

III.F.2.3 Follow-up of Regional and international recommendations

No.

III.F.2.4 Actions to avoid shortfalls

The problem has been noted and in order to improve the situation we have to consider how our system for collecting the data on vessels with length less than 12 meters can be improved.

III.F.3 Landings

III.F.3.1 Achievements: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year.

Data collection was exhaustive.

Landings data (based on logbooks and fishermen diaries) are stored in EFIS.

III.F.3.2 Data quality: Results and deviation from NP proposal

Table III.F.1 contains the information about the variables collected during the sampling year.

III.F.3.3 Follow-up of Regional and international recommendations

STECF:

MS are responsible for collecting the data on landings and discards for all the vessels flying their flag, wherever they fish, and provide data to the organisation responsible for advice and/or management	Landings and discards data are collected for all the vessels.
In case the landings occur in a non-EU country, MS shall do all necessary effort to organise the	In the NAFO area, sampling will be done by observers on board (employed by EMI). No regular

sampling	fishery in other areas. In the Baltic Sea trawl and gill net fishery, data collection is normally also done by observers on board (not in 2009 as fish owners did not agree to take observers on board)

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III.F.3.4 Actions to avoid shortfalls

None.

III.G Research surveys at sea

III.G.1 Achievements: Results and deviation from NP proposal

See standard table III.G.1 with the information collected during the sampling year.
All planned surveys were performed (Figures and Table below).

III.G.1.1. Estonian-Latvian Gulf of Riga herring acoustic survey

was performed in from 25-31 of July 2012, using the same chartered fishing vessel as in previous years. Altogether 19 trawl hauls were performed and acoustic track of 505 NM was covered with acoustic measurements.

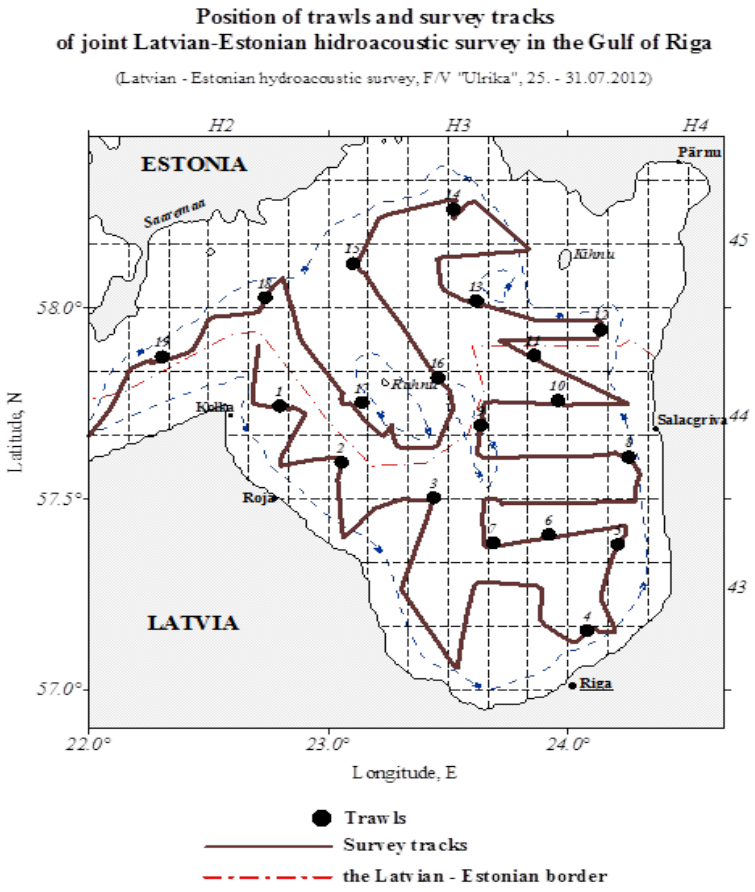

Figure III.G. 1. Survey track and location of con tol hauls during the EST-LAT acoustic survey in the Gulf of Riga in July 2012. Length of acoustic track 505 NM, 19 hauls.

III.G.1.2. Joint Estonian-Finnish-Polish acoustic survey (BIAS) was conducted between 24 October and 1 November 2012, using (as in previous years) Polish research vessel “Baltica”. Altogether 674 NM of acoustic survey and 22 contol hauls were realised. All planned survey tasks were accomplished. All collected information was uploaded ICES BAD2 database.

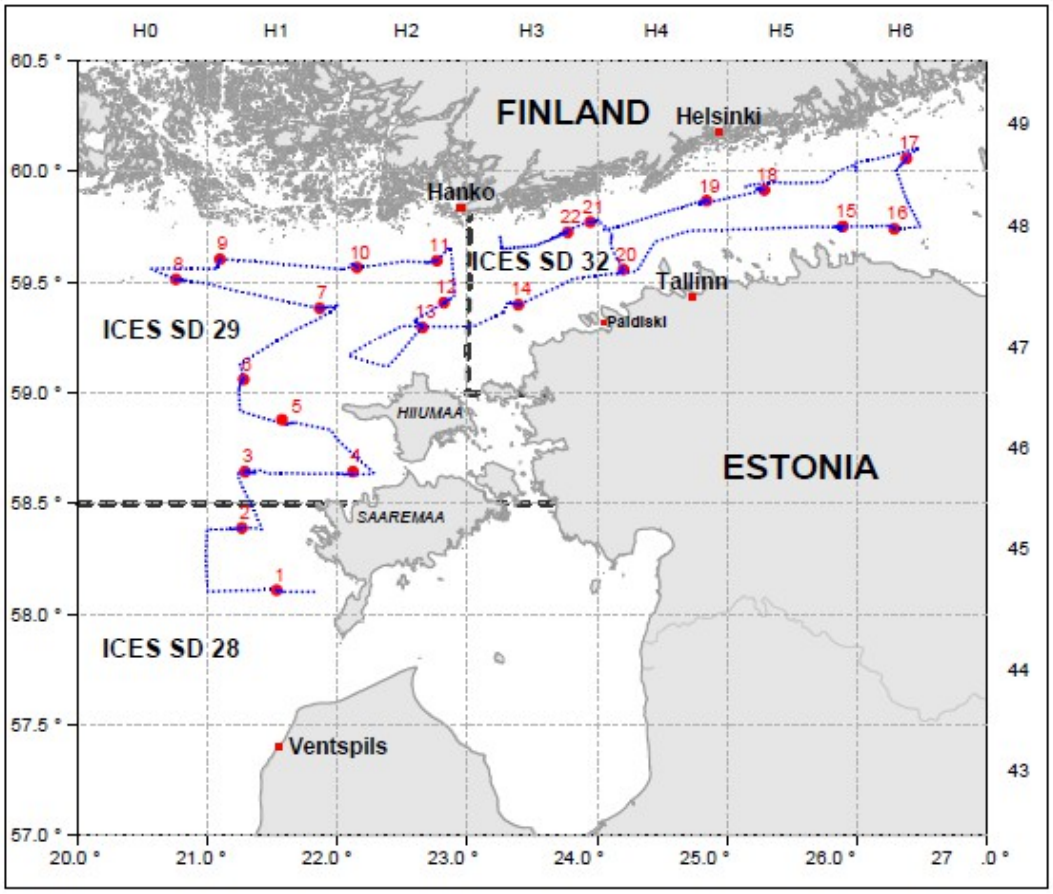

Figure III.G.2. Survey track of EST-POL-FIN BIAS in Sub-divisions 28.2 , 29 and 32 in October 2012 (674 NM of acoustic survey and 22 contol hauls were realised).

III.G.1.3. BITS 4 Qrt survey was conducted as in previous years in November 2012. 10 planned trawl hauls were performed in the ICES Sub-divisions 28.2 and 29. The survey was performed using the methodology of Baltic International Trawl Surveys. Alike in the previous years, the small (530) standard TV3 trawl was used. The 30´ trawl hauls were performed at randomly chosen position from the Clear-Tow Database All collected information was uploaded to ICES DATRAS database.

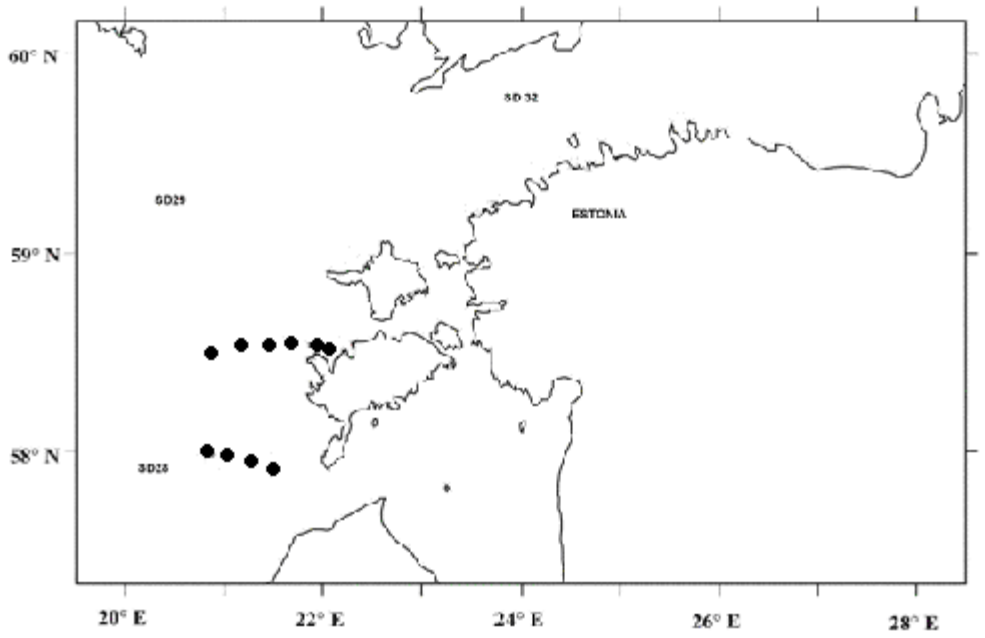

Figure III.G.3. BITS IV QRT survey in November 2012. Black dots indicate the location of trawl hauls.

III.G.2 Data quality: Results and deviation from NP proposal

In the NP Proposal, the number of fish hauls during BITS 4 QRT survey was, by mistake, indicated as 15 (should be 10). No major problems were encountered during the survey. Total 9 hauls were performed. The weather conditions (wind speed >15 m/s) did not allow to perform the deepest planned trawl haul in the SD 29.

III.G.3 Follow-up of Regional and international recommendations

No.

III.G.4 Actions to avoid shortfalls

None.

IV. Module of the evaluation of the economic situation of the aquaculture and processing industry

IV.A Collection of data concerning the aquaculture

IV.A.1 Achievements: Results and deviation from NP proposal

Although it is not mandatory we decided to continue collecting data about the farming of rainbow trout as it forms around 80 % of the commercial aquaculture production in Estonia.

Types of data collection for each economic variable are described in standard table IV.A.3. The data concerning aquaculture were collected as listed and defined in Appendix X of Commission Decision 2010/93/EU. The collection of data depended on source of economic variable. The part of data was collected from the financial statements sent by the enterprises to the Estonia Tax and Customs Board. For other economic variables questionnaires were sent out. It is important to mention that all these surveys have been carried out on a voluntary basis. In spite of source of the variables census type of data collection mode applied.

The willingness to give information on voluntary basis (questionnaires) was not very high among enterprises.

IV.A.2 Data quality: Results and deviation from NP proposal

Accuracy indicators and the values of them are presented in standard table IV.A.3. Response rates was used as accuracy indicator for census type of data collection.

IV.A.3 Follow-up of Regional and international recommendations

No

IV.A.4 Actions to avoid shortfalls

More clarification about importance of data collection among target group should be one possible way to enhance response rate.

IV.B Collection of data concerning the processing industry

IV.B.1 Achievements: Results and deviation from NP proposal

Types of data collection for each economic variable are described in the standard table IV.B.2.

The data concerning processing industry were collected as listed and defined in Appendix XII of Commission Decision 2010/93/EU. The most part of data was collected from the financial statements sent by the enterprises to the Estonia Tax and Customs Board. Also telephone interviews were applied to specify some variables.

There was a deviation from NP proposal. Instead of probability sample survey census type of data collection scheme was decided to use. It became obvious during the preparation of survey that the size of the population is much modest and most part of data is available from the financial statements of enterprises.

IV.B.2 Data quality: Results and deviation from NP proposal

Accuracy indicators and the values of them are presented in standard table IV.B.2. Response rates was used as accuracy indicator for census type of data collection. The data sources for estimation of variables are homogenous, therefore data are consistent.

Due to the changes in data collection scheme there was deviation from NP proposal. Instead of probability sample survey census type of data collection scheme was decided to use. It became obvious during the preparation of survey that the size of the population is much modest and most part of data is available from the financial statements of enterprises.

IV.B.3 Follow-up of Regional and international recommendations

No.

IV.B.4 Actions to avoid shortfalls

No need.

V. Module of evaluation of the effects of the fishing sector on the marine ecosystem

V.1 Achievements: Results and deviation from NP proposal

Standard table V.1 contains the information collected during the sampling year. As in previous years, data on effects of bottom trawling are not collected as there is virtually no bottom trawling in the Estonian EEZ.

V.2 Actions to avoid shortfalls

No problems.

VI. Module for management and use of the data

All fisheries data collected in frames of the National Programme as well as purely from national sources are stored in EMI in several separate databases. Currently, work is ongoing to join all databases of EMI (including fisheries databases) into a common system. As the first step, a meta-database of all available data (since the 1940s) is still under construction. This work is financed from other sources. Financing (from other sources) will be available to include all historic data into digital database presumably by the end of 2013. Fisheries data for 2005-12 are in agreed format and easily accessible from the institute. Survey data and data of test fishing for 2012 are already or will be shortly available from the Fish Resources Department, Ministry of the Environment.

Ministry of the Environment has established two new modules in information system to fulfil the requirements of COMMISSION REGULATION (EC) No 665/2008 articles 8 and 9. All the primary and meta-data for 2012 collected under DCF will be uploaded and available at the end of the year. Data call requests received and the responses provided in 2012 are registred in EFIS.

Data collected in frames of DCF are forwarded to correponding international users (Table VI). In addition, these data together with data for local species not included in DCF, are included in databases and analyzed by EMI. The results are regularly reported to EME and EMA which use these reports to manage local stocks. Management measures for regulated stocks (agreed internationally) are also included in these reports.

VI.1 Achievements: Results and deviation from NP proposal

Standard table VI.1 contains the information collected during the sampling year.
Data of previous years are uploaded in FishFrame 3.2 or 4.1.
Since 2010, all data on analyses of commercial catches have been uploaded in the Regional database FishFrame 5.0.

VI.2 Actions to avoid shortfalls

No deviations identified; no actions needed.

VII. Follow-up of STECF recommendations

STECF recommendations	Follow-up
MS are responsible for collecting the data on landings and discards for all the vessels flying their flag, wherever they fish, and provide data to the organisation responsible for advice and/or management	Landings and discards data are collected for all the vessels.
In case the landings occur in a non-EU country, MS shall do all necessary effort to organise the sampling	In the NAFO area, sampling will be done by observers on board (employed by EMI). No regular fishery in other areas.
MS are obliged to sample recreational fisheries of cod, salmon and bluefin tuna in EU waters	According to Appendix IV, 1), salmon, cod and eel should be sampled in the Baltic Sea (no recreational fishery in other regions). It has been done.
All MS are requested to collect calcified structures for stocks listed in Appendix XV whether they have the facilities to read them or not.	This is the case.
On the confusion on the interpretation of the requirement to triennially update the estimates of "Other biological parameters".	The common tool to evaluate the precision of the biological parameters (COST project), will be implemented.
SGRN requests MS to clearly define the economic parameters collected under Module J of the DCR, with particular reference to fixed/capital costs.	All efforts will be done to meet this requirement
SGECA 10-03 recommended MS to increase the effort in acquiring responses from the sample or from the population, as the level of non response is affected by the methods used to carry out the survey.	Estonia is following this recommendation.

SGECA 10-03 recommended MS to cross-checking data coming from different sources.	Estonia takes this recommendation into consideration. The data is crosschecked in EFIS. Observer data is checked with VMS and EFIS.
With regard to the processing sector, SGECA 10-03 observed that official statistics on economic data on the processing sector are already available. In case official statistics cannot be used to meet the requirements of DCF, MS should clearly explain the reason and justify the use of additional surveys.	Estonia takes this recommendation into consideration.
SGECA 10-03 suggested guidelines on how MS should collect and present information on quality of the data collected.	Estonia is following this recommendation.
SGECA 10-03 recommended all MS to submit data in the given time frame and thoroughly check the data quality before submitting them.	Estonia is following this recommendation. Several checks are performed before upload – checks for unusual values, comparing totals etc.
EWG 11-18 recommends MS to refer to paragraph "5.2 Best practices" of the final report of the capital WS as guidelines for capital estimation.	Estonia takes this recommendation into consideration.
EWG 11-18 recommends MS to keep the clustering scheme consistent over time, and if not to explain the reason in the AR.	Estonia takes this recommendation into consideration.
EWG 11-18 recommends MS to apply the method proposed by the "capital WS" and to give details on the average wages used in the AR.	Estonia will follow this recommendation.

VIII. List of acronyms and abbreviations

AR	Annual Report
BIAS	Baltic International Acoustic Survey
BITS	Baltic International Trawl Survey
CPUE	Catch per unit effort
CV	Coefficient of variation
DCF	Data Collection Framework
DCR	Data Collection Regulation
EEZ	Exclusive economic zone
EFIS	Estonian Fisheries Information System (a computerized database for commercial fishery in the Fisheries Department, Ministry of Agriculture, for recreational fishery – Ministry of the Environment)
EMA	Estonian Ministry of Agriculture
EME	Estonian Ministry of the Environment
EMI	Estonian Marine Institute, University of Tartu
EU	European Union
FMC	Fisheries Monitoring Centre
ICES	International Council for the Exploration of the Sea
LM	Liaison Meeting
MS	Member States
NA	North Atlantic
NAFO	North Atlantic Fisheries Organization
NC	National Correspondent
NM	Nautical mile
NP	National Programme
PIM	Perpetual Inventory Method
RCM	Regional coordination meeting
SD	Sub-division

SGECA	STECF Subgroup on Economic Affairs
SGRN	STECF Subgroup on Research Needs
STECF	Scientific, Technical and Economic Committee for Fisheries
VMS	Vessel monitoring system
WGBFAS	Baltic Fisheries Assessment Working Group (ICES)
WGBIFS	Baltic International Fish Survey Working Group (ICES)
WGBAST	Baltic Salmon and Trout Working Group (ICES)
WGEEL	Joint EIFAAC/ICES Working Group on Eels
WGMME	Working Group on Marine Mammal Ecology (ICES)

IX Comments, suggestions and reflections

No.

X References

No.

XI Annexes

No.