Estonian National Programme

under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2010/93/EU for the Collection, Management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy

2011 to 2013

Tallinn 31 March 2010

Contents

I. General framework

The planned Estonian data collection programme corresponds to the Guidelines (Version 2009) for the submission of National Programme Proposals on the National Data Collection Programmes under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2010/93/EU.

Indicative cost of multi-annual national programme are presented in Annex.

Years 2011 to 2013 are covered by the NP Proposal.

Sampling scheme has been re-arranged according to the requirements of métier-directed sampling. However, the number of fish analyzed has not decreased even if the requirements of the new regulation allow it. This also means that sampling of several locally very important species (Baltic Sea: G2 species) will be conducted annually (not triennially) also in future, otherwise it will not be possible to get data needed for management these stocks.

The programme will be conducted in close cooperation between:

- **Estonian Marine Institute (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 Industry 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 (EFIS).

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

All data collected under the programme are dealt with in confidence. Accesses to the data are limited to authorized staff members from the participating institutions and no one outside the institutions has access to the data without permission.

II. Organisation of the National Programme

II.A National organisation and coordination

Estonia has assigned the Estonian Ministry of the Environment as the National Correspondent.

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One national co-ordination meeting is planned annually. Topics related to coordination of the national data collection programme with other MS national programmes in the Baltic Sea and in the North Atlantic regions will be discussed.

II.B International coordination and international scientific meetings

Table II.B.1 contains a preliminary list of meetings that will likely be attended by national experts. According to Article 10(2) of Council Reg. 665/2008, the Commission shall provide MS, by 15 December each year, with the list of meetings it considers eligible for Community financial support for the experts' participation in the following year; the list will be updated after that.

MS will probably not provide a chairperson, or stock co-ordinators involved in the provision of data sets for the working group.

II.C Regional co-ordination

Estonia will participate in the following Regional Coordination Meetings: Baltic Sea, North Atlantic.

III. Module of the evaluation of the fishing sector

III.A General description of the fishing sector

The Estonian fleet operates regularly in 2 regions:

1. Baltic Sea, fishing ground SD 25-32 (occasionally SD 22-24);
2. North Atlantic, mostly fishing grounds of the NAFO Regulatory Area but (occasionally) also other fishing grounds.

Irregular fishery is conducted in the North Sea and Eastern Arctic region (fishing grounds I and II), and even 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 North Atlantic.

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

III.B Economic variables

Baltic Sea, North Sea and Eastern Arctic, and North Atlantic

III.B.1 Data acquisition

(a) Definition of variables

The data concerning economic variables will be collected as listed and defined in Appendix VI of Commission Decision 2008/949/EC. The list of economic variable groups with variables therein is following:

Income: Includes gross value of landings, income from leasing out quota or other fishing rights, direct subsidies and other income.

Personnel costs: Wages and salaries of crew (including social security costs) and imputed value of unpaid labour.

Energy costs: Energy costs excluding lubrication oil.

Repair & maintenance costs: Gross costs of repair and maintenance to vessel and gear.

Other operational costs: Include variable costs, non-variable costs and lease/rental payments for quota or other fishing rights.

Capital costs: Annual depreciation of vessels.

Capital value: Includes value of physical capital issued from depreciated replacement value, value of physical capital issued from depreciated historical value and value of quota and other fishing rights.

Investments: Investments in physical capital i.e. improvements made to existing vessel/gear during the given year.

Financial position: Data on the debt/asset.

Employment: Engaged crew, FTE National and FTE harmonised.

Fleet: Data on number of vessels, mean length over all (LOA), mean vessel tonnage, mean vessel power and mean age.

Effort: Data on days at sea and energy consumption.

Number of fishing enterprises/units: Number of fishing enterprises/units.

Production value per species: Value of landings per species and average price per species (in euros per kilo, live weight).

(b) Type of data collection

Data collection depends on source of economic variable. For economic variables included in Estonian Fisheries Information System (EFIS) (includes log book data, fishing vessel register) data will be collected about all members of the population (Census type of data collection). For other economic variables questionnaires will be sent out. It is important to mention that all these surveys are carried out on a voluntary basis. Previous practice has shown quite low participation in the fleet segments of Baltic trawlers. Due to the above reason and low population sizes, questionnaires will be sent for each vessel. In these populations the use of non probability sample survey is justified to achieve better results. However, in the case of vessels using passive gears

(coastal fishery) probability sample survey will be used as the number of population members and response rate in these two segments is quite high.

Type of data collection for each fleet segment and for each economic variable as listed in Appendix VI of Commission Decision 2008/949/EC is described in Table III.B.3.

(c)Target and frame population

There are no deviations from the definition "target population" given in the DCF. The population is all vessels in the Community Fishing Fleet Register on 1 January. All fishing vessels are segmented by operating region and length classes according to regulation with auxiliary information in fishing vessel register and log book data. The frame population is further stratified according to fishing method and activity to construct an efficient sampling design. Log book data is linked to vessels (exception for coastal fishing) to divide them into active or inactive vessels. All economic variables have to be collected for active vessels. For each vessel for which economic variables are collected, the corresponding transversal variables have also to be collected. For inactive vessels only capital value, fleet and capacity data is required to be collected.

Due to the small total number of vessels larger than 12 m in the Estonian fleet, some segments have been clustered. The explanation is given in Table III.B.2, and the clusters in the Table III.B.1 are usually named according to the biggest segment in terms of number of vessels.

(d) Data sources

Economic data collection is based on multi-stage survey that combines information from different data sources. Main sources are the Estonian Fisheries Information System (EFIS) (includes log book data, fishing vessel register) and account survey.

Data sources by variables will be as follows: logbooks and sales notes for income through fishing (gross value of landings), company accounts for other income. Surveys will be used to obtain data on personnel costs, energy costs, repair and maintenance costs, other operational costs, capital costs and capital values. The data on investments will be collected using (and

comparing if possible) different sources (surveys, company accounts, information about vessel price data on relevant web-pages etc.). The data on financial position will be obtained using surveys, and on employment using surveys and company accounts (trawling sectors) and Estonian Fisheries Information System and the data in the County Governments (coastal fishery using passive gears). Estonian Fisheries Information System also reflects the relevant data concerning fleet and effort, number of fishing enterprises/units and production value per species.

Employment: Total employment is calculated as average number of persons employed by the vessel. FTE National and FTE harmonised will be 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 will be collected from the enterprises through the questionnaire. The calculation of FTE will be based on laws which define holidays and working time in Estonia. The working hours of employee in 2010 should be 1860 hours per year. The harmonised reference level for FTE working hours will be set to 2000 hours in accordance with the Appendix VI of Commission Decision 2008/949/EC.

Imputed value of unpaid labour: Data about the working hours of possible unpaid persons will be collected through the questionnaires. The calculations will be based on working hours and minimum hourly wage in Estonia.

Capital value: The historical value of capital will be gathered through the questionnaires. This data should be available from company accounts. For calculation of replacement value Estonia intends to follow the proposed PIM methodology in the capital valuation report (Methodologies for calculation of capital value as given in the report of the study N° FISH/2005/03 on the evaluation of the capital value, investments and capital costs in the fisheries sector).

Fuel efficiency of fish capture provides information on trends in the fuel efficiency of different fisheries. The calculation of this indicator will be based on the relationship between fuel consumption and the value of landed catch. The data on fuel consumption is collected annually with the economic data collection questionnaires. Value of landings is calculated as the product of

landings by species and prices. The indicator will be calculated for each population segment based on the level 6 for the metier classification by region, quarter and year.

(e) Sampling frame and allocation scheme

Data collection depends on source of economic variable. For economic variables included in Estonian Fisheries Information System (EFIS) (includes log book data, fishing vessel register) data will be collected about all members of the population (Census type of data collection). For other economic variables questionnaires will be sent out. It is important to mention that all these surveys are carried out on a voluntary basis. Previous practice has shown quite low participation in the fleet segments of Baltic trawlers. Due to the above reason and low population sizes, questionnaires will be sent for each vessel. In these populations the use of non probability sample survey is justified to achieve better results. However, in the case of vessels using passive gears (coastal fishery) probability sample survey will be used as the number of population members and response rate in these two segments is quite high.

A simplified formula $n=N/(1+N(e)^2)$, where confidence level is assumed 95% and degree of variability P=0,5, will be used to calculate the random sample sizes (n-sample size; N-population size; e-level of precision). Sample size will be calculated with ±10% precision level.

III.B.2 Estimation

For all estimable quantities mean, median and quartiles will be obtained.

III.B.3 Data quality evaluation

Standard errors for the estimated means and sums will be obtained, taking into account the fact of sampling from finite population. In addition, sensitivity analysis approaches will be used to assess potential biases due to non-response and false reporting.

III.B.4 Data presentation

The reference year of economic data collection is the preceding year. Preliminary financial statements data will be available on the 4th quarter after the reference year. Therefore information of the economic situation of fishing sector will be provided not earlier than one year after the reference year investigated.

III B.5 Regional coordination

Recommendations directed to Member States:

Recommendation:	Action that will be taken:
The RCM Baltic 2007 recommends the description of the source of the information and when applying a sampling procedure a description of method and strategy has to be clearly described in the national programme to give useful information on quality of the obtained data. In the technical report there should then be a qualitative quality report containing a thorough description of the methods and strategies used and the characteristics of the gathered data. The RCM Baltic 2007 recommends to not use the precision level as an indicator of heterogeneity but to rather use the mean value and standard deviation.	Estonia will take into account these recommendations in the preparation of NP

RCM recommendations will be applied if applicable.

III.B.6 Derogations and non-conformities

No derogations and non-conformities.

III.C Biological - métier-related variables

Baltic Sea

III.C.1 Data acquisition

The initial selection of metiers to sample was carried out following the ranking system described in Commission Decision 2008/949/EC, Chapter III B.B1.3.(1)(b). The information used for ranking was obtained from logbooks (census), coastal fishery reports (census), price data, and vessel register data (census).

RCM Baltic (2009) defined metiers (level 6) to be used for NP 2011-2013 for the Baltic region.

All metiers where trips have been allocated for samplings are given in Standard table III.C.1.

Information used for ranking was obtained from the EFIS, which data are based on logbooks data.

Information on fishing effort in EFIS is different for different gear types: fishing hours can be obtained for various trawls, number of checks (the total number of checked gear: fykes, gill-nets, hooks) for other gear. Therefore, the ranking of metiers was mostly based on 1) landings data and then 2) value of the catch.

Gill-net, trap-net and longline fisheries are essentially mixed fisheries (a category missing for the Baltic Sea in Appendix IV, level 5), and the catch is a mixture of demersal marine and freshwater fish, with some amount of anadromous, catadromous (eel) and small pelagic fish. For example, fine mesh-sized gill nets assigned for the herring, are mostly used by fishermen to catch a freshwater demersal species, perch. Similarly, smaller fyke nets and gill-nets were formerly used mainly to catch eel, but nowadays (due to the eel stock collapse) the bulk of the catch consists of demersal fish of marine and freshwater origin.

Due to similar fishing operations, similar catch composition and overlapping fishing grounds, some metiers were merged for sampling purposes (Table III.C.2). This was done, in the case of the Baltic Sea, following recommendations of the RCM (2009).

Commission Decision 2008/949/EC, section III.B.B1.3.(1)(e) was as a basis for allocation the sampling effort between its relevant metiers recognising (i) that the sampling unit will be the fishing trip and that sampling effort should be proportional to the relative effort and variability of the metiers and (ii) the requirement that the minimum number of fishing trips to be sampled shall never be less than 1 fishing trip

per month during the fishing season for fishing trips of less than 2 weeks and 1 fishing trip per quarter otherwise.

The total number of trips per metier depends on

- Metier variability,
- the planned number of samples collected during the trip (depending on the duration of the trip),
- the duration of fishing season,
- the utilisation of data as a tuning fleet,
- data collection for discard sampling,
- sampling needs for weight, age, sex, maturity.

For highly variable metiers (gill-net fishery, fyke-net fishery) sampling effort per unit of landings is relatively greater.

Table III.C.3 summarises the sampling strategies and sampling effort for metier-related variables and Table III.C.4 to show the length measurement targets.

As in earlier years of the DCR (and therefore formally accepted as a part of the national data collection programme), Estonia will continue gill-net test fishing in permanent research areas along the Estonian coast using standard methods (Thoresson, 1993; Saat et al., 2003). This fishery-independent approach corresponds to the ecosystem approach in fishery data collection and fisheries management, and it has successfully been used for species which have many local stocks (e.g. perch which usually does not migrate over 10 km during its life) or for which there is no directed fishery and only single specimens can be obtained from commercial landings (e.g. cod, whitefish). Test fishing gives data on the recruitment (year-class strength of juveniles) of the eastern Baltic cod (autumn test fishing in deep Küdema Bay since 1993). This method gives CPUE and year-class data also for several species: pikeperch, flounder, pike, and also for many species not listed in the DCR (but of local commercial and recreational importance, e.g. several cyprinids), as the whole assemblage is fished with a defined series of gill-nets of different mesh size, and all the fish are individually analysed. For the abovementioned species, test-fishing gives age-length key which is applied also for commercial samples.

Continuation of test-fishing (gathering fisheries-independent data) is also important for calculation of indicators 1-4 of the effects of the fisheries sector on the marine ecosystem. Data are available since 1992.

RCM Baltic (2009) endorsed RCM NS&EA recommendation of MS to use the average landing figures over the years 2007-2008 as the basis for ranking métiers within the NP 2011-2013. This recommendation was followed were data in EFIS were available; in some cases, only data for 2008 (more reliable than data for 2007) were used for ranking purposes. The following metiers were recognised in the Baltic Sea, in accordance with RCM Baltic (2009) recommendations:

Name of métier:	***OTM_SPF_16-104_0_0***	
Flag country:	Estonia	
Date of update:	*04.05.2010*	
Description of the métier		
Spatial distribution of the fishing activity of the métier	SD 28.1, 28.2, 29, 32	
Temporal distribution of the fishing activity of the métiers	*All the year round, with a break in midsummer*	
List the fisheries within the métier, including main target and by-catch species:	*As proposed by the Baltic RCM, includes* OTB_SPF_16-31_0_0, OTM_SPF_16-31_0_0, PTM_SPF_16-31_0_0, OTM_SPF_32-89_0_0. Trawl fishery targeting *Clupea harengus* and *Sprattus sprattus*. The main bycatch species is *Osmerus eperlanus* (occasionally) which is also retained	
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding
	Herring	Insignificant
	Sprat	Insignificant
Vessels involved in métier Magnitude in No. and predominant size : *(Text)*	Vessels 12-40 m	
Is significant part of the catches landed in foreign countries?	Landing country	Sampling agreement (y/n) ref. to table
	Denmark, Sweden	N
	Latvia	N, occasional landings are sampled by Estonia, no formal agreement
Sampling of the métier		
Indicate if this Métier is	*As proposed by the Baltic RCM, includes* OTB_SPF_16-	

merged with other métiers for sampling	31_0_0, OTM_SPF_16-31_0_0, PTM_SPF_16-31_0_0, OTM_SPF_32-89_0_0.		
Justification for merging:	Decision of the Baltic RCM (2009)		
Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)
	Landings		Concurrent
	Discards		Concurrent-at-sea (observers)
	Catch		Concurrent-at-sea (observers)
Indicate if the Métier is associated with particular sampling problems:	None		
Additional remarks (historical and others):			

Name of métier:	***FPN_SPF_0_0_0***	
Flag country:	Estonia	
Date of update:	*31.03.2010*	
Description of the métier		
Spatial distribution of the fishing activity of the métier	SD 28.1, 28.2, 29, 32	
Temporal distribution of the fishing activity of the métiers	*Mostly May-July*	
List the fisheries within the métier, including main target and by-catch species:	*Herring fyke and pound net fishery. Various by-catch (also retained, not discarded): freshwater species, Belone belone, Platichthys flesus, etc*	
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding
	Herring	Insignificant
	Other (Bycatch)	Insignificant
Vessels involved in métier Magnitude in No.	Vessels below 12 m	

and predominant size : *(Text)*			
Is significant part of the catches landed in foreign countries?	Landing country	Sampling agreement (y/n) ref. to table	
	None		
Sampling of the métier			
Indicate if this Métier is merged with other métiers for sampling			
Justification for merging:	Decision of the Baltic RCM (2009)		
Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)
	Landings		Concurrent
	Discards		Concurrent
	Catch		Concurrent
Indicate if the Métier is associated with particular sampling problems:			
Additional remarks (historical and others):			

Name of métier:	***GNS_FWS_0_0_0***
Flag country:	Estonia
Date of update:	*04.05.2010*
Description of the métier	
Spatial distribution of the fishing activity of the métier	SD 28.1, 28.2, 29, 32
Temporal distribution of the fishing activity of the métiers	*All the year round, limited during winter (due to ice coverage)*
List the fisheries within the métier, including main target and by-catch species:	*Formerly named as GNS_DEF_>=36_0_0. Includes GNS_SPF_32_89_0_0 (gill nets for herring) as catch consists also freshwater species (mainly Peca fluviatilis). Perca fluviatilis, Sander lucioperca, cyprinids, Esox lucius, Coregonus lavaretus, in some areas Platichthys flesus , occasionally Salmo trutta and Salmo salar*

Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding
	All	Insignificant; occasionally – in case if catch is damaged by seals, seabirds

Vessels involved in métier Magnitude in No. and predominant size : *(Text)*	Vessels below 12 m	
Is significant part of the catches landed in foreign countries?	Landing country	Sampling agreement (y/n) ref. to table
	None	None

Sampling of the métier

Indicate if this Métier is merged with other métiers for sampling	*Formerly named as GNS_DEF_>=36_0_0. Includes GNS_SPF_32_89_0_0 (gill nets for herring) as catch consists also freshwater species (mainly perch).*		
Justification for merging:	Decision of the Baltic RCM (2009)		
Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)
	Landings		Concurrent
	Discards		Concurrent
	Catch		
Indicate if the Métier is associated with particular sampling problems:	Very variable metier.		
Additional remarks (historical and others):	Historically (since 1992) gill net fishery in Estonia has been monitored using test-fishing in fixed areas along the Estonian coast. This approach will be continued in 2011-13.		

Name of métier:	***FYK_FWS_0_0_0***
Flag country:	Estonia
Date of update:	*04.05.2010*

Description of the métier

Spatial distribution of the fishing activity of the métier	SD 28, 29, 32

Temporal distribution of the fishing activity of the métiers	*Spring-autumn*		
List the fisheries within the métier, including main target and by-catch species:	*Fyke net fishery mostly targeting freshwater species (Perca fluviatilis, Sander lucioperca, Esox lucius, cyprinids), but also migratory species (Coregonus lavaretus, Salmo trutta ,Anguilla anguilla) and marine fish (Platichthys flesus etc).*		
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding	
	All	Insignificant	
Vessels involved in métier Magnitude in No. and predominant size : *(Text)*	Vessels below 12 m		
Is significant part of the catches landed in foreign countries? **NO**	Landing country	Sampling agreement (y/n) ref. to table	
Sampling of the métier			
Indicate if this Métier is merged with other métiers for sampling			
Justification for merging:			
Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)
	Landings		Concurrent
	Discards		Concurrent
	Catch		
Indicate if the Métier is associated with particular sampling problems:			
Additional remarks (historical and others):			

Name of métier:	**OTB_DEF_>=105_1_110**			
Flag country:	Estonia			
Date of update:	*04.05.2010*			
Description of the métier				
Spatial distribution of the fishing activity of the métier	SD 24-26			
Temporal distribution of the fishing activity of the métiers	From February to June (mainly in April and May)			
List the fisheries within the métier, including main target and by-catch species:	***Trawl fishery for cod***			
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding		
	Cod	Insignificant		
Vessels involved in métier Magnitude in No. and predominant size : *(Text)*	Vessels 18-40 m			
Is significant part of the catches landed in foreign countries? **YES 100%**	Landing country	Sampling agreement (y/n) ref. to table		
	Denmark, Sweden, etc	None. The landings to Denmark are sampled by Denmark , no formal agreement		
Sampling of the métier				
Indicate if this Métier is merged with other métiers for sampling	OTB_DEF_ =105_1_110			
Justification for merging:	Small catches			
Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)	
	Landings			
	Discards			
	Catch			
Indicate if the Métier is	All landings outside Estonia. In 2009, no observers were allowed			

associated with particular sampling problems:	by vessel owners on board to sample catches and discards. Due to low volume of catches (less than 5% in EU TAC) and landings outside Estonia, DEROGATION is asked to sample this fishery
Additional remarks (historical and others):	

Name of métier:	**GNS_DEF_110-156_0_0**	
Flag country:	Estonia	
Date of update:	*04.05.2010*	
Description of the métier		
Spatial distribution of the fishing activity of the métier	SD 24-26	
Temporal distribution of the fishing activity of the métiers	Limited fishery from January to September with annual catch ca 300 t	
List the fisheries within the métier, including main target and by-catch species:	***Anchored gill net fishery for cod***	
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Stock	Level of discarding
	Cod	Insignificant
Vessels involved in métier Magnitude in No. and predominant size : *(Text)*	Vessels 18-40 m	
Is significant part of the catches landed in foreign countries? **YES 100%**	Landing country	Sampling agreement (y/n) ref. to table
	Denmark, Sweden, etc	None. The landings to Denmark are sampled by Denmark, no formal agreement
Sampling of the métier		
Indicate if this Métier is merged with other métiers for sampling	No	
Justification for merging:		

Intended annual sampling level and sampling method:	Catch category	Sampling effort (Primary sampling unit)	Sampling method (concurrent, other)
	Landings		
	Discards		
	Catch		
Indicate if the Métier is associated with particular sampling problems:	All landings outside Estonia. In 2009, no observers were allowed by vessel owners on board to sample catches and discards. Due to low volume of catches (less than 5% in EU TAC) and landings outside Estonia, DEROGATION is asked to sample this fishery		
Additional remarks (historical and others):			

Table III.C.3 summarises the sampling strategies that have been adopted for métier-related variables.

Sampling effort is allocated amongst the sampling frames recognizing (i) that the sampling unit will be the fishing trip and that sampling effort should be proportional to the relative effort and variability of the métiers and (ii) the requirement that the minimum number of fishing trips to be sampled shall never be less than 1 fishing trip per month during the fishing season for fishing trips of less than 2 weeks and 1 fishing trip per quarter otherwise (Commission Decision 2008/949/EC, section III.B1.3.(1)(e). For highly variable métiers, greater sampling effort per unit of fishing effort is allocated, in order to reach the specified precision targets. Table III.C.3 gives a prediction of the sampling intensity by métier. Table III.C.5 shows the planned targets and requirements for length measurements for all métiers combined (at the level where the precision must be targeted).

III.C.2 Estimation procedures

Discards will be registered by observers on board of fishing vessels; presumably, discarding will be at a low level as in previous years (according to the Estonian legislation, discarding is not allowed).

For main (internationally regulated) stocks, sampling will be at the level of previous years (agreed with corresponding ICES working groups), and data will be transferred to corresponding ICES working groups for further analyses.

For most of coastal stocks (eg. Perch, pikeperch, whitefish, pike, flounder), sampling will be at a higher level than prescribed by the Regulation (but at the level of previous years), to ensure higher precision and sufficient data for advice formulation. For these stocks, age-length keys and CPUE data will be obtained, as previously (since 1992), from test fishing data.

III.C.3 Data quality evaluation

The biggest problems with data quality will be related to the sampling of very variable métiers, namely fyke nets and gill nets. Sampling effort will be directed to the most important fishing grounds and fishing seasons. As for gill net fishery, test fishing data from different parts of the coastal sea will be used as a reference.

III.C.4 Data presentation

Data of sampling of particular trips will be available soon after sampling, and they will be stored in the institute databases. All data will be available in FishFrame by the end of the I quarter of the next year.

III.C.5 Regional coordination

Estonia has no formal agreements on coordination of sampling of discards or landings of foreign flags. The landings of other MS in the Estonian ports are occasional and are well below 5% of the total landings. However, Estonia collects samples from Estonian vessels occasionally landing fish (herring from the Gulf of Riga) in Latvia (Salacgriva).

RCM Baltic recommendations	Responsive actions
The RCM Baltic recommends that in order to get cost effective and scientifically sound and robust biological sampling schemes some of the gear types at level 4 in the "Nantes matrix" needs to be merged. In the Baltic such gears are bottom trawl/multi rig trawl, which should be treated as one sampling unit instead of two. Further set gillnet, trammel net and tangle net should be one sampling unit instead of three. The RCM Baltic further recommends that all information on gear used in sampled fishing operations should be recorded, allowing post stratification into the different gears if necessary (*Baltic RCM recommendation 2005*)	Accomplished
The RCM is aware of FISH/2007/03 Lot 5: Development of tools for logbook data analysis, but will draw the attention to that some temporary solutions are needed until more permanent solutions are established based on the results of the outcome of this study. Until robust international guidelines for analysis of logbook data is available RCM Baltic recommends that: at a trip level, or at a fishing operation level when possible, the retained part of the catch should be classified by target assemblage (demersal, freshwater, anadromous) and sorted by weight. The target assemblage that comes up at the first position should be considered as the target assemblage to report in the matrix. When logbook data is incomplete regarding the number of rigs for demersal trawls the fishing trips/fishing operations should be allocated to OTB. The selectivity devices Bacoma and T90 should be treated as one strata until it is possible to distinguish between them in the logbooks.	Accomplished

Midwater otter trawls (OTM) are allocated to the OTM fishing activity even if they sometimes are operated very close to the bottom *(Baltic RCM recommendation 2007)*.	
RCM Baltic endorses RCM NS&EA recommendation of MS to use the average landing figures over the years 2007-2008 as the basis for ranking métiers within the NP 2011-2013 (Baltic RCM recommendation 2009)	Implemented
RCM Baltic 2009 endorses the recommendation from RCM NS &EA: For the purposes of ranking métiers to sample, National data on effort, landings and value by métier and fishing ground 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, métiers and units of the variables as well as the deadline for submission of the national data. The appointed coordinator is responsible for requesting the data and compiling it on a regional level; 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 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	To be implemented by May 2010

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 (Baltic RCM recommendations 2009)	
In order to use the time of the RCM more efficient and for the harmonisation of the NPs, including the quality checks, the exchange data tables from all NPs, namely planned number of individuals to be sampled for age, length, weight, sex and maturity should be compiled before the next RCM. (Baltic RCM 2009)	Accepted
The RCM Baltic recommends that landings of the most recent three years reported by MS for non-TAC stocks, listed in Appendix VII of the Commission Decision 2008/949/EC, should be made available to MS. This information is required to evaluate if sampling is an obligation or not.	Accepted

III.C.6 Derogations and non-conformities

No.

North Atlantic

III.C.1 Data acquisition

Information used for ranking was originally obtained from the EFIS, which data are based on logbooks data. However, this information appeared to be incomplete and it was revised using observers´ data.

Metiers selected for sampling are listed in Table III.C.1, and they were selected according to the rules laid down in the Commission Decision 93/2010/EU.

Commission Decision 93/2010/EU, was as a basis for allocation the sampling effort between relevant metiers recognising (i) that the sampling unit will be the fishing trip and that sampling effort should be

proportional to the relative effort and variability of the metiers and (ii) the requirement that the minimum number of fishing trips to be sampled shall never be less than 1 fishing trip per month during the fishing season for fishing trips of less than 2 weeks and 1 fishing trip per quarter otherwise.

Observers employed by the EMI on board of vessels perform data collection in the NAFO area. Metier OTM_CRU_40_2-19-22: Monthly data are needed BY NAFO SC for shrimp assessment. Therefore, minimum 8 trips per year (each lasting usually 1,5-2 months) are required for data collection. Sampling intensity will be lower than in previous years but sufficient to get data on length, sex and maturity distribution of shrimp catches, and abundance and length distribution of the bycatch (mostly juvenile redfish).

Finfish is fished usually during 2-3 fishing trips per year. Observers on board will collect relevant data during 2 trips per year.

The following Table gives an overview of landings in this region (NAFO 3LMNO) in 2008 and 2009:

Species		2008	2009
Anarhichas lupus	CAA	12	5
Wolf-fishes n.e.i.	CAT	2	0
Reinhardtius hippo-glossoides	GHL	299	300
Urophycis tenuis	HKW	19	0
Hippoglossoides platessoides	PLA	77	29
Pandalus borealis	PRA	11269	3685
Sebastes sp	RED	1003	1748
Macrourus berglax	RHG	132	41
Skates n.e.i.	SKA	123	29
Glyptocephalus cynoglos-sus	WIT	38	8
Gadus morhua	COD	73	128
Limanda ferruginea	YEL	33	0
Squalidae	DGX	3	0
Hippoglossus hippoglos-sus	HAL	3	0
Rockling	GGD	0	1
Illex illecebrosus	SQI	0	5
TOTAL		13086	5979

Table III.C.3 summarises the sampling strategies and sampling effort for metier-related variables and Table III.C.4 to show the length measurement targets.

Type of data collection**:** Concurrent-at sea (observers on board).

The following metiers were recognised in the North Atlantic:

Metier description template		
RCM	NA	
Fishing ground	*NAFO 3LM*	
Name of métier:	*OTB_CRU_40_2_19-22*	
Flag country:	EE	
Date of update:	3/5/10	
Description of the métier		
Spatial distribution of the fishing activity of the métier	*NAFO 3LM*	
Seasonal pattern of the fishing activity of the métier	Annual	
Number of vessels involved in metier by LOA group:	*3 vessels >40m*	
Detailed gear types and selectivity devices used in métier	*Bottom otter trawl*	
Main target and by-catch species for the métier	*Pandalus borealis* *By-catch redfish, capelin*	
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Species	Level of discarding

Is significant part of the catches landed in foreign countries?	Landing country	Sampling agreement (y/n) ref. to table
	Canada	N
	Iceland	N

Sampling of the metier			
Indicate if this Métier is merged with other metiers for sampling			
Justification for merging:			
Sampling scheme	Type of sampling	Sampling frame and primary sampling unit for data collection	Data collected (retained catch; discarded catch; unsorted catch) and sampling method (concurrent, other)
	Observers at sea	*Vessel list; PSU=vessel*	*Retained&discarded; concurrent*
	Self sampling		
	Sampling landings on shore		
Indicate if the Métier is associated with particular sampling problems:			
Additional remarks (historical and others):			

Metier description template	
RCM	NA

Fishing ground	*NAFO 3KLMNO*	
Name of métier:	*OTB_DEF_130-280_0_0*	
Flag country:	EE	
Date of update:	3/5/10	
Description of the métier		
Spatial distribution of the fishing activity of the métier	*NAFO 3KLMNO*	
Seasonal pattern of the fishing activity of the métier	Annual	
Number of vessels involved in metier by LOA group:	*2 vessels >40m*	
Detailed gear types and selectivity devices used in métier	*Bottom otter trawl*	
Main target and by-catch species for the métier	*Redfish, Greenland halibut, skates, roughhead granadier* *By-catch cod, American plaice, witchflounder, yellowtail - ~4% of weight each*	
Indicate level of discard of major species (mostly subset of G1 or G2 species): *(Text. e.g. Significant, Insignificant, Occasional high)*	Species	Level of discarding
Is significant part of the catches landed in foreign countries?	Landing country	Sampling agreement (y/n) ref. to table
	Spain	n
Sampling of the metier		

Indicate if this Métier is merged with other metiers for sampling			
Justification for merging:			
Sampling scheme	Type of sampling	Sampling frame and primary sampling unit for data collection	Data collected (retained catch; discarded catch; unsorted catch) and sampling method (concurrent, other)
	Observers at sea		*Retained&discarded; concurrent*
	Self sampling		
	Sampling landings on shore		
Indicate if the Métier is associated with particular sampling problems:			
Additional remarks (historical and others):			

III.C.2 Estimation procedures

Discard volumes by species and length distribution of discards will be recorded by observers on board, daily during the whole trip (usually ca 2 months).

III.C.3 Data quality evaluation

For OTM_CRU_40_2-19-22, shrimp and bycatch measurements will be carried out both for NAFO 3M and 3L.

For the finfish fishery in the NAFO area (OTB_DEF_130-280_0_0), no further (national) metier stratification can be proposed as different fishing grounds are fished not regularly.

III.C.4 Data presentation

Data are digitalized normally within 1 month after the trip which may last several months.

III.C.5 Regional coordination

Estonia has no agreements on coordination of sampling of discards and length structure of the landings of foreign flags. There are no landings from North Atlantic of other MS in the Estonian ports. Also, Estonian catch from this region is not landed in Estonia but in other countries (finfish mainly in Spain, shrimp – in Island, Canada).

Due to a large number of shrimp analysed from NAFO 3M and 3L and good temporal coverage (all fishing months) in recent years, and due to a remarkable share of srimp landings in the EU landings, Estonia may act as coordinator for data collection of shrimp in NAFO 3LM. This proposal includes also bycatch analyses in shrimp fishery.

Data are presented to NAFO SC.

III.C.6 Derogations and non-conformities

No.

North Sea and Eastern Arctic

Due to very low quotas, the Estonian fishery in this region is rather irregular, with low effort, landings and value of landings, and no sampling scheme can be implemented.

The following Table gives an overview of landings in this region in 2008 and 2009:

Year	Species	3-alfa	Ia	IIa	Ib	Vlb	XIV	XII	**Total**
2008	*Pandalus borealis*	PRA	1353	0	120	0	0	0	**1473**
2009	*Pandalus borealis*	PRA	4171	388	343	0	0	0	**4903**

Other regions

Over many years, there was a single (exploratory) trip to the southern Atlantic in 2006, which yielded in total landings of 1867 t of mixed cephalopods and finfish. Regular sampling scheme for this region is impossible.

III.C.5 Derogations and non-conformities

No sampling in the North Sea and Eastern Arctic, and in Other regions.

III.D Biological - Recreational fisheries

Baltic

III.D.1 Data acquisition

Recreational fishery is a fast developing sector in Estonia. Number of recreational fishermen has doubled since 2000 (rough estimation based on purchased licenses) and covers approximately 6 % (70 000) of the population between age 15-65. Further more, the relatively low engagement compared to other neighbouring countries like Finland, Sweden and Latvia allows a further growth of sector. According to the results of questionnaire (pilot study 2004-2005), recreational fishery is more concentrated to fresh waters, especially rivers. Recreational fishermen mostly use rods, but they can purchase a license to use the limited number of gill nets and longlines at sea and in big lakes.

Rod fishery does not need a license on most of water bodies except in salmon rivers therefore catches are not reported and are in general unknown.

For licensed recreational fishery (gill net fishery, salmon fishery in rivers etc) it is mandatory to report the catches (length and weight of fish) since 2005. In general, reported catches of salmon, sea trout and cod by recreational fishermen are small. The proportion of recreational catch in the total catch was between 13-24% in the case of cod (catch in coastal waters only), sea trout, whitefish and flounder, and 40% in the case of salmon. The latter number probably reflects the increased reporting rate of recreational catches. The following table includes data for 2007-2008:

Species	Recreational catch, kg		Commercial catch, kg		Recreational catch, %	
	2007	2008	2007	2008	2007	2008
Anguilla anguilla	201	198	6106	5070	3,3	3,9
Clupea harengus membras	2457	3578	26108083	31838372	0,0	0,0
Coregonus lavaretus	6487	7029	39753	29823	16,3	23,6
Esox lucius	1352	1299	13710	15745	9,9	8,3
*Gadus morhua**	204	492	835	2398	24,4	20,5
Perca fluviatilis	10788	11790	776765	702504	1,4	1,7
Platichthys flesus	42755	40121	334858	276054	12,8	14,5
Salmo salar	2365	2148	5769	5582	41,0	38,5
Salmo trutta	3299	2800	17110	11855	19,3	23,6
Sander lucioperca	1286	842	99180	64000	1,3	1,3
Sprattus sprattus	29	46	51007239	48601638	0,0	0,0

* Commercial catch of cod in coastal waters of Estonia (total catch from the Baltic Sea over 900 t)

The total amount of cod, eel and salmon taken and reported by recreational fishermen is less than 5 t. The most important species is salmon.

Due tothe fishing activity and fishermens capability has increased the previous situation may have changed. Rod catches of the species listed in annex IV, for other species (locally important species), as well as fishermen preferences and other relevant caractheristics of the sector are planned to estimate in frame of the mid-term study by questionnaire and observations (A or B type of data collection referred in paragraph III.D.1). Due to the lack of data and uncertainty of the present situatio e.g. ratio of the sea fishermen the entire population should be the target group for questionnaires carried out in the internet, e-mails or by other methods made clear during the preparatory phase of the study in 2010. Study containing questionnaires, analysis and data presentation is planned to carry out during 2011-2013.

There is an important recreational under-ice fishery which targets mostly perch on Pärnu Bay (Gulf of Riga) where catches of perch exceed the yearly catches of the commercial fishery in certain years (with long ice cover).Therefore different sea areas are studied separately.

III.D.2 Estimation procedures

Data for salmon, eel and cod are collected from the study described above. Precise methodology of the study will be worked out in preparatory phase of the study in 2010. Also the reported data from EFIS is used for describing the cathces of licensed fishery.

III.D.3 Data quality evaluation

Data on recreational catches of salmon, eel and cod obtained from EFIS can be considered exhaustive for gill net, longline fishery and salmon fishery in rivers. Training (leaflets) to standardize fish length measurements and scales collection from salmon (for ageing) is recommended.

III.D.4 Data presentation

Data for a particular year can be obtained from EFIS during the 1st quarter of the next year. Aggregated data of rod fishery and catches from the study will be available for public in the end of year of study.

III.D.5 Regional coordination

The RCM Baltic has not issued any recommendations concerning recreational fisheries. Multi-lateral agreements with other MS haven't been concluded.

III.D.6 Derogations and non-conformities

No.

III.E Biological - stock-related variables

Baltic

III.E.1 Data acquisition

Table III.E.1 identifies which stocks are going to be included in the sampling scheme and provides the elements for requested derogations.

The stocks that will not be sampled for any of the parameters are in pale grey in Table III.E.1. Eel catches will be sampled in both of two management units: the Baltic and the Peipsi watershed.

Table III E.2 gives an overview of the long-term sampling strategy with respect to 'Stock related variables'.

Table III E.3 gives an overview of the planned sampling for age, weight, sex ratio, maturity and fecundity in the NP years.

In addition, Estonia will continue to monitor wild salmon stocks in rivers falling in the Gulf of Finland, and in the Pärnu River (Gulf of Riga) (as well as several sea trout rivers). Information on abundance of smolt and parr will be collected using electrofishing. Information in number of ascending individuals will be collected using a trap net in one river (the Pirita River), as in earlier years.

The following sources will be used for collecting stock-related variables: commercial fisheries, surveys, test-fishing. For more abundant species (with higher sampling effort), data collection meets the requirements specified in the Appendix VII of Commission Decision 93/2010/EU.

However, Estonia is in the position to collect stock-related data according to the scheme used in previous years (during participation in the DCR since 2005, and earlier). This means data collection for species currently of low abundance, and the annual scheme of data collection. Therefore, sampling will be annual for the species, which were sampled (according to the requirements of DCR) triannually. This allows to follow changes in recruitment and to prognosticate the future stock situation.

Most of these stocks are local (sedentary), and international cooperation in sampling (concerning sampling volume) wouldn’t help.

For sex ratios, maturity and fecundity, the parameters are referenced both to age or length.

III.E.2 Estimation procedures

For internationally regulated species, data will be treated according to ICES WG requirements. CPUE data and length/age data for local stocks will be validated by data from test fishing.

III.E.3 Data quality evaluation

The coverage and precision levels for abundant species sampled with high intensity (herring, sprat, perch, pikeperch, flounder, etc) will be in accordance with those specified in Commission Decision 2008/949/EC, Chapter III, section B.B2.4.

III.E.4 Data presentation

Data will be made available to corresponding ICES WG-s when needed. All data of the sampling year will be included in FishFrame by the end of the Ist quarter of the next year.

III.E.5 Regional coordination

Sampling intensity for herring, sprat, and salmon and sea trout smolt production in natural populations, meets the requirements of the corresponding ICES WG-s.

RCM recommendations	**Responsive actions**
RCM Baltic recommends providing aggregated maturity data to the assessment working groups on a yearly basis for those stocks that are sampled on a routine basis yearly, in a format agreed by the working group *(Baltic RCM recommends 2005-Tallinn, Estonia)*.	Estonia is preparing such data on annual basis.
RCM Baltic recommends seeking multilateral agreements to overcome the obligation to provide data for species by member states that have small catches of these species *(Baltic RCM recommends 2005-Tallinn, Estonia)*.	No such agreements yet.

III.E.6 Derogations and non-conformities

As explained above, Estonia will keep the annual sampling scheme for the species, which were sampled annually according to the requirements of the former DCR.

For less abundant species (eel, cod, turbot, salmon, sea trout), targets set by the Commission Decision 2008/949/EC, Chapter III, section B.B2.4, may not be achieved.

Formal derogations with regard to the data collection on stock related variables are included in Table III E.1; no further derogations are requested.

North Atlantic

III.E.1 Data acquisition

Table III.E.1 identifies which stocks are going to be included in the sampling scheme and provides the elements for requested derogations.

The stocks that will not be sampled for any of the parameters are in pale grey in Table III.E.1.

Table III E.2 gives an overview of the long-term sampling strategy with respect to 'Stock related variables'.

Table III E.3 gives an overview of the planned sampling for age, weight, sex ratio, maturity and fecundity in the NP years.

The following source will be used for collecting stock-related variables: sampling by observers on boar of fishing vessels. Data collection meets the requirements specified in the Appendix VII of Commission Decision 2008/949/EC.

For sex ratios, maturity and fecundity, the parameters are referenced to length.

III.E.2 Estimation procedures

Data are transmitted to NAFO SC. No estimations of stock variables in MS.

III.E.3 Data quality evaluation

The coverage and precision levels will be in accordance with those specified in Commission Decision 2008/949/EC, Chapter III, section B.B2.4.

To ensure quality of data, observers on board are regularly trained and briefed before every trip. Data of different observers are cross-checked.

III.E.4 Data presentation

Data will be made available to NAFO SC, both for summer meeting and autumn (shrimp) meeting.

III.E.5 Regional coordination

Sampling intensity for shrimp meets the requirements of the NAFO SC. Data for redfish and Greenland halibut will be forwarded to the NAFO SC, and in combination with other MS data, the sampling intensity and targets meet the requirements of the Commission Decision 2008/949/EC.

III.E.6 Derogations and non-conformities

Formal derogations with regard to the data collection on "Stock related variables" are already included in table III E.1 (see section III.E.1). Estonia asks for derogation in sampling several stocks not fished by the Estonian fleet, fished in very low quantities (less than 200 t), and the stocks, which are fished irregularly (not every year) (Table III.E.1).

North Sea and Eastern Arctic, and Other regions

Estonian fishery in these regions is not regular; quantities of landed fishes are low (Table III.E.1).

Derogations and non-conformities

Estonia asks for derogation in sampling in the North Sea and Eastern Arctic region, and in Other regions.

III.F Transversal variables

III.F.1 Capacity

III.F.1.1 Data acquisition

The number and characters of the vessels according to segments is available in fishing vessel register. All vessels, even non-active vessels, and auxiliary vessels are included in the vessel register.

III.F.1.2 Data Quality evaluation

Information will be complete.

III.F.2 Effort

III.F.2.1 Data acquisition

The effort variables listed in appendix VIII will be obtained from EFIS (100% coverage); data in EFIS are mostly based on landings and effort declarations. For the North Atlantic, data will be verified using observers' data.

No specific actions for vessels less than 10 meters are needed as data are included in EFIS.

III.F.2.2 Data quality evaluation

For the North Atlantic, data will be verified using observers' data.

III.F.2.3 Data presentation

Data in EFIS are updated regularly within the year. Observers' data will be available normally within 1 month after the trip.

III.F.2.4 Regional coordination

The Baltic RCM (2009) recommendation (below) is accepted:

Economic variables: Transversal variables – common understanding of effort definitions	
RCM BALTIC 2009 Recommendation	RCM BALTIC recommends that consideration be given to making submission of the following Transversal Variables ***optional***: • number of trips • number of rigs • number of fishing operations • number of nets/length • number of hooks/number of lines • number of pots, traps • soaking time
Follow-up actions Needed	RCM Liaison Meeting to consider the proposal to make submission of the Transversal Variables listed above optional.
Responsible persons for follow-up actions	RCM Liaison Meeting
Time frame (Deadline)	December 2009

III.F.2.5 Derogations and non-conformities

No**.**

III.F.3 Landings

III.F.3.1 Data acquisition

Landings live weight will be obtained from EFIS (based on logbooks, landings and effort declarations).

Table III.F.3 to provides conversion factors; they are normally not used, as intact fishes will be analysed.

To calculate annual average prices per species, weighted averages will be used.

No specific actions for vessels less than 10 meters are needed, as data are included in EFIS.

III.F.3.2 Data quality evaluation

Cross-checking and data collected by observers on board will be used for data validation.

III.F.3.3 Data presentation

Landings data for a particular month will be included in EFIS normally within 1-2 month.

III.F.3.4 Regional coordination

No.

III.F.3.5 Derogations and non-conformities

No.

III.G Research surveys at sea

III.G.1 Planned surveys

Estonia will participate (as in earlier years) in 3 surveys listed at Appendix IX of Commission Decision (93/2010/EU) (Table III.G.1):

Name of survey	Aim of survey	Area(s) covered	Period (Month)
Baltic International Trawl Survey, BITS Q4 (Figure 1)	Cod and other demersal	IIIb-d	IV q
Baltic International Acoustic Survey (Autumn) (Fig. 2)	Herring, sprat abundance	IIIb-d	Sep-Oct
Gulf of Riga Acoustic Herring Survey (Fig. 3)	Herring abundance	IIIb-d	III q

Data of all these surveys will be stored both in national and international (ICES- DATRAS; BAD1, BAD2) databases.

Data obtained during all these surveys are suitable for the calculation of the ecosystem indicators 1 to 4 listed in appendix XIII.

Table III.G.1 gives an overview of the planned numbers of days at sea, and the planned numbers of echo sounding tracks, fishing hauls.

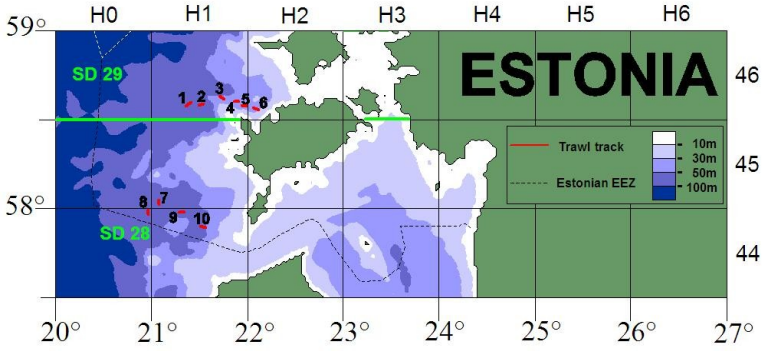

Figure 1. Baltic International Trawl Survey, BITS Q4 (Haul positions)

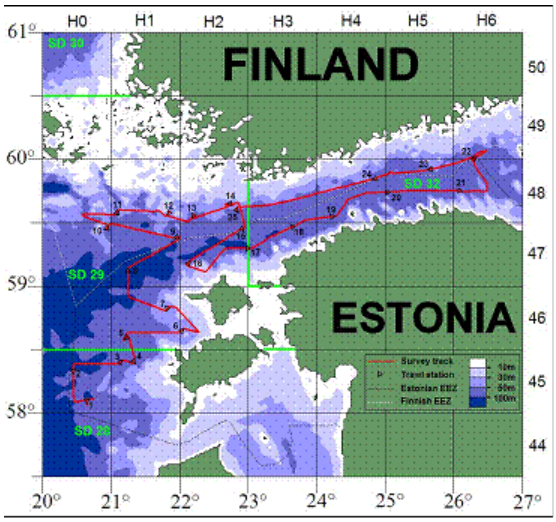

Figure 2. Baltic International Acoustic Survey (Autumn) (*Acoustic survey track and trawl positions)*

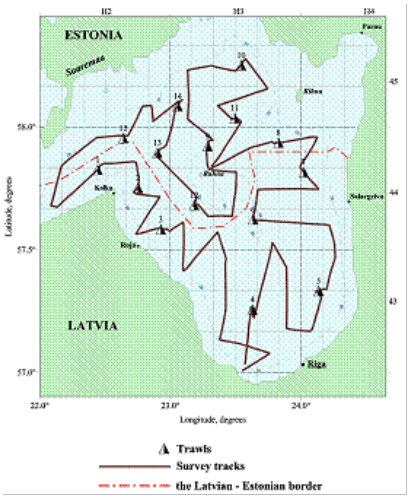

Figure 3. Gulf of Riga Acoustic Herring Survey (*Acoustic survey track and trawl positions)*

III.G.2 Modifications in the surveys

No changes in the design of the surveys are foreseen.

III.G.3 Data presentation

Normally, survey data will be available for end users within 1-2 months after the survey.

III.G.4 Regional coordination

Herring survey is conducted in close coopetarion with other MS: the Gulf of Riga survey together with Latvia (using the same vessel), open sea survey – in cooperation with Poland, Finland, Latvia (using the same vessel and sharing the workload).

III.G.5 Derogations and non conformities

No.

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 General description of the aquaculture sector

There are around 20 commercial companies in Estonia whose main or important activity is fish farming. The total commercial aquaculture production has been increasing, reaching 971 tonnes in 2009. The main product was rainbow trout forming 81% from the total production. The share of the second important fish – common carp, was already only 7,6%. Most of the trout and carp production is sold on the domestic market. Due to its small size, the aquaculture sector has little influence on the national economy, fish consumption or social situation in rural areas.

According to Council Regulation (EC) 199/2008 and Commission Decision 2008/949/EC the collection of data for freshwater species is not mandatory. Only aquaculture activities related to marine species, including eel and salmon deserve required attention. There is only one fish farm growing eel in Estonia, which production was about 30 tonnes in 2009. Salmon is rearing for restocking only by one fish farm, which is state-owned.

IV.A.2 Data acquisition

(a) Definition of variables

The data will be collected all variables listed and defined in Appendix X of Commission Decision 2008/949/EC. The list of economic variable groups with variables therein is following:

Income: Includes turnover, direct subsidies and other income.

Personnel costs: Wages and salaries of staff and imputed value of unpaid labour.

Energy costs: Energy costs.

Raw material costs: Livestock costs and feed costs.

Repair and maintenance costs: Repair and maintenance.

Other operational costs: Include packaging costs.

Capital costs: Depreciation of capital and Financial Costs, net (interest costs of capital).

Extraordinary costs: Extraordinary costs, net

Capital value: Total value of assets - total accumulated value of all net investments in the enterprise at the end of the year.

Investments: Net investments - purchase and sale of assets during the year.

Debt: Debt at the end of the fiscal year.

Raw material volume: Livestock and fish feed (tonne).

Volume of sales: Volume of sales (tonne).

Employment: Number of persons employed and FTE National.

Enterprises: Number of enterprises.

(b) Type of data collection

Data concerning the aquaculture sector will be collected using Census type of data collection.

(c)Target and frame population

The population will be defined as follows: enterprises who have indicated that their primary activity is "Fish Farming". As the collection of data for freshwater species is not mandatory, only aquaculture activities related to marine species, including eel and salmon deserve required attention. The Ministry of Agriculture keeps relevant list.

(d) Data sources

Surveys will be used to obtain data. Also data will be compared with the financial statements sent by the enterprises to the Central Commercial Register.

FTE National will be 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 will be collected from the enterprises through the questionnaire. The calculation of FTE will be based on laws which define holidays and working time in Estonia. The working hours of employee in 2010 should be 1860 hours per year.

Imputed value of unpaid labour: Data about the working hours of possible unpaid persons will be collected through the questionnaires. The calculations will be based on working hours and minimum hourly wage in Estonia.

(e) Sampling frame and allocation scheme

There is only one fish farm growing eel in Estonia. Salmon is rearing for restocking only by one fish farm which is state-owned.

IV.A.3 Estimation

As there is only one fish farm in each segment, there is no need for estimation methods from sample to population.

IV.A.4 Data quality evaluation

Data quality depends on response rate. As there is only one fish farm in each segment, there is no need for additional methods to evaluate data quality.

IV.A.5 Data presentation

The reference year of economic data collection is the preceding year. Preliminary financial statements data will be available on the 4th quarter after the reference year. Therefore information of the economic situation of aquaculture sector will be provided no earlier than one year after the period investigated.

Due to the small number of fish farms confidentiality problems may arise.

IV.A.6 Regional coordination

IV.A.7 Derogations and non-conformities

No derogations and non-conformities.

IV.B. Collection of data concerning the processing industry

IV.B.1 Data acquisition

(a) Definition of variables

The data will be collected all variables listed and defined in Appendix XII of Commission Decision 2008/949/EC. The list of economic variable groups with variables therein is following:

Income: Includes turnover, direct subsidies and other income.

Personnel costs: Wages and salaries of staff and imputed value of unpaid labour.

Energy costs: Energy costs.

Raw material costs: Purchase of fish and other raw material for production.

Other operational costs: Include packaging costs.

Capital costs: Depreciation of capital and Financial Costs, net (interest costs of capital).

Extraordinary costs: Extraordinary costs, net

Capital value: Total value of assets - total accumulated value of all net investments in the enterprise at the end of the year.

Investments: Net investments - purchase and sale of assets during the year.

Debt: Debt at the end of the year.

Employment: Number of persons employed and FTE National.

Enterprises: Number of enterprises.

(b) Type of data collection

Data concerning the processing industry will be collected using Probability Sample Survey, in which data are collected from a sample of a population members randomly selected. However, in the case of enterprises that carry out fish processing but not as main activity Census type of data collection will be applied.

(c)Target and frame population

The population will be defined as follows: all enterprises who have indicated that their primary activity is "Processing and preserving of fish and fish products". The Ministry of Agriculture, Fishery Economics Department, keeps relevant list. Due to the fact that Estonia does not have very large fish processing plants (i.e. sector is rather homogenous), it is not planned to stratify the population into several segments (e.g. by the number of employees). For enterprises that carry out fish processing, but not as main

activity, data about the number of enterprises and turnover attributed to fish processing will be collected in the first year of programming period.

(d) Data sources

All data (income, personnel costs, energy costs etc.) will be collected using the financial statements sent by the enterprises to the Central Commercial Register (by June 30 of the following year). In the case if it is possible (i.e. when enterprise agrees) telephone interviews will be used to specify the details (e.g. on FTE of employed personnel; Imputed value of unpaid labour).

FTE National will be 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 will be collected from the enterprises through the questionnaire. The calculation of FTE will be based on laws which define holidays and working time in Estonia. The working hours of employee in 2010 should be 1860 hours per year.

Imputed value of unpaid labour: Data about the working hours of possible unpaid persons will be collected through the questionnaires. The calculations will be based on working hours and minimum hourly wage in Estonia.

(e) Sampling frame and allocation scheme

Data concerning the processing industry will be collected using Probability Sample Survey, in which data are collected from a sample of a population members randomly selected. However, in the case of enterprises that carry out fish processing, but not as main activity, Census type of data collection will be applied.

A simplified formula $n=N/(1+N(e)^2)$, where confidence level is assumed 95% and degree of variability P=0,5, will be used to calculate the sample sizes (n-sample size; N-population size; e-level of precision). Sample size will be calculated with ±10% precision level.

IV.B.2 Estimation

For all estimable quantities (in the case of random sampling and census with non-response) mean, median and quartiles will be obtained.

IV.B.3 Data quality evaluation

Standard errors for the estimated means and sums will be obtained, taking into account the fact of sampling from finite population. In addition, sensitivity analysis approaches will be used to assess potential biases due to non-response and false reporting.

IV.B.4 Data presentation

The reference year of economic data collection is the preceding year. Preliminary financial statements data will be available on the 4th quarter after the reference year. Therefore information of the economic situation of processing industry sector will be provided no earlier than one year after the period investigated.

IV.B.5 Regional coordination

IV.B.6 Derogations and non-conformities

Not expected.

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

Evaluation of the effects of the fishing sector on the marine ecosystem will be carried out for the Estonian EEZ, as fishery in fishing other grounds by the Estonian fleet is limited, and therefore sampling is also limited. However, data concerning other regions will be collected and delivered, if needed, for the international use. Indicators 1-7 and 9 will be evaluated. As bottom trawling is not a common fishing activity (actually prohibited in the most of EEZ), indicator 8 will not be evaluated.

The surveys, which contribute to the collection of data for the calculation of ecosystem indicators, were specified in section III.G.1. In addition, indicators 1-4 can will be calculated for the gill-net test-fishing data available since 1992 (in one area) or since 1993-97 (other permanent research areas).

VMS data will be available for North Atlantic fisheries from the Sea Inspectorate.

VI. Module for management and use of the data

Central national database is EFIS (operated by the Ministry of Agriculture) which stores fleet data, fisheries permissions register, primary commercial fishery landings and first sell data. Catch data on recreational fishery is collected by Ministry of the Environment . Both databases are protected by passwords.

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. Fisheries data since 2005 are in agreed format and easily accessible from the institute. Data collected in frames of DCR since 2005, including survey data and data of test fishing are included in database of Ministry of The Environment.

Also, EMI has a database which includes NAFO observers' data on effort, catch composition, discards.

At the same time, serious efforts are currently in progress to improve the EFIS, Estonian Fisheries Information System. This system was transformed from the Ministry of the Environment to the Ministry of Agriculture since 1 January 2005. The improvements still needed include more customer-friendly system to get reports, data submission control system (data on logbooks are not always verified before entering in EFIS; the duration of trawling or days from the last check of the passive gear are missing in the database, or is missing the number of passive gears - which is probably due to the fact that these mandatory data are not submitted in logbooks or fishermen diaries). The improvements are under the way.

Some of data collected in frames of DCR are submitted also into international databases (survey data, herring, sprat, salmon data etc – ICES working groups; test-fishing data in the reference area – HELCOM COBRA). All national data are submitted in FishFrame.

Production of sets of data to support scientific analysis as a basis for advice to fisheries management is based on data stored in the institute's databases or requested from EFIS. Biological parameter estimates, preparation of sets of data for stock assessments and corresponding scientific analysis is done in EMI (for local stocks) or in ICES working groups or NAFO SC.

Table VI.B.1 contains a preliminary list of meetings for scientific advice support that will likely be attended by national experts.

VII. Follow-up of STECF recommendations

SGRN insists that all actions planned for the new DCR, regardless of any funding agenda issue, actually starts on the 1st of January 2009.	Accepted
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.
On precision levels	The common tool to evaluate the precision of the biological parameters (COST project), will be available to the public early in 2009. This tool will be implemented.
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 will be 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 done.
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

VIII. List of derogations

List of requests for derogations:

Short title of derogation	**NP Proposal section**	**Derogation approved or rejected[1]**	**Year of approval or rejection of past requests for derogations**
Non-participation in BITS I q survey		a	2005
Fishery-independent data collection (gill-net fishing in permanent research areas) (as well as monitoring of wild salmon rivers which is now included in DCR); also III.C.5,		a	Formally approved (has been a part of the Estonian NP since 2005)
No sampling cod fishery in the western part of the Baltic Sea.	III.C.1		No sampling in previous years has been formally accepted
No sampling metiers in the North Sea and Eastern Arctic, and in Other regions.	III.C	a	As in NP 2009-10
Estonia will keep the annual sampling scheme for the species, which were sampled annually according to the requirements of the former DCR.	III.E.5	a	As in all previous NP years
Not sampling several stocks not fished by	III.E.5 North	a	As in all previous

the Estonian fleet, or fished in very low quantities	Atlantic; North Sea and eastern arctic; Other regions		NP years

[1] Insert 'a' for approved or 'r' for rejected

Provide a complete list of requests for derogations, making reference to the NP Proposal section where detailed justifications for these derogations are given. In cases where derogations were approved in the past, these should be listed here and the year of approval shall be given.

IX. List of acronyms and abbreviations

EFIS Estonian Fisheries Information System (a computerized database in the Fisheries Department, Ministry of Agriculture)

EMI Estonian Marine Institute

WGBFAS Baltic Fisheries Assessment Working Group (ICES)

WGBIFS Baltic International Fish Survey Working Group (ICES)

WGBAST Baltic Salmon and Trout Working Group (ICES)

X. Comments, suggestions and reflections

No.

XI. References

Saat, T.; Eschbaum, R.; Vetemaa, M.; Verliin, A. (2003). Ten years of coastal fish monitoring in Estonia: dynamics of fish assemblages and populations. In: ICES CM 2003/R:14: ICES Annual Science Conference; Tallinn; 2003. International Council for the Exporation of the Sea, 2003.

Thoresson, G. 1993. Guidelines for coastal monitoring. Kustalaborattoriet, Öregrund.

ANNEX

National programme for the collection, management and use of data in the fisheries sector for the period N - (N+2)

INDICATIVE COST OF MULTI-ANNUAL NATIONAL PROGRAMME N - (N+2) *

- EURO -

Year	Planned eligible expenditure	Maximum Community contribution
N	626 997,33	313 498,67
N+1	643 680,00	321 840,00
N+2	669 532,00	334 766,00
TOTAL	1 940 209,33	970 104,67