

**LATVIAN NATIONAL PROGRAMME FOR**

**COLLECTION OF FISHERIES DATA**

**2005**

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## Abbreviations

BIODATA	Biological Data System for Latvian Fisheries
BITS	Baltic International Trawl Survey
CPUE	Catch per Unit Effort
DIFRES	Danish Institute for Fisheries Research
EFDC	European Fisheries Data Collection System
EC	European Commission
EP	Extended Programme
GT	Gross tonnage
IBSFC	International Baltic Sea Fisheries Commission
IBSSP	International Baltic Sea Sampling Programme
ICES	International Council for the Exploration of the Sea
ICIS	Integrated Control and Information System for Latvian Fisheries
kW	Kilowatts
LFAD	Latvian Fisheries Analysis Data Base
LSR	Latvian Ships Register of the Latvian Maritime Administration
LPUE	Landing per Unit Effort
LATFRI	Latvian Fisheries Research Institute
MEB	Marine Environment Board, Ministry of Environment of the Republic of Latvia
MP	Minimum Programme
NAFO	Northwest Atlantic Fisheries Organization
NBF	National Board of Fisheries, Ministry of Agriculture of the Republic of Latvia
NEAFC	North East Atlantic Fisheries Commission
SGRN	Subgroup on Research Needs
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total Allowable Catch

## 1. Introduction

The “Latvian National Programme for Collection of Fisheries Data, 2005” (hereinafter – the Programme) has been developed in accordance with the rules laid down in the:

- *Council Regulation (EC) No 1543/2000 of 29 June 2000 establishing a Community framework for the collection and management of the data needed to conduct the common fisheries policy;*
- *Commission Regulation (EC) No 1639/2001 of 25 July 2001 (hereinafter – the Regulation) establishing the minimum and extended Community programmes for the collection of data in the fisheries sector and laying down detailed rules for the application of Council Regulation (EC) N<sup>o</sup> 1543/2000;*
- *Council Decision of 29 June 2000 on a financial contribution from the Community towards the expenditure incurred by Member States in collecting data, and for financing studies and pilot projects for carrying out the common fisheries policy (2000/439/EC).*

In the Programme also the most important draft Amendments to the *Regulation (EC) No 1639/2001* as proposed by the Commission, which are scheduled to come into effect already in 2004, have been taken into the account.

Details of activities within the Programme are given item by item based on the Regulation scheme. The summarized input and resources expressly required to fulfill the items within the Minimum Programme (MP) and Extended Programme (EP) are set out in Section 7 of this Programme.

The detailed input and budget figures for 2005 programme are provided in the separate from this document file fiches (“Latvia-nat-progr2005-MP-EngLEUR.xls” and “Latvia-nat-progr2005-EP-EngLEUR.xls”), as requested by the Commission. All costs are expressed in EUR, at exchange rate for the national currency LVL as for in the 7 May 2004.

Latvia requests derogation in regard to data for the collection of which there have been alterations foreseen in the Programme if compared with criteria set in the Regulation.

The programme will be conducted in close cooperation among:

- **National Board of Fisheries of the Ministry of Agriculture of the Republic of Latvia (NBF)**  
NBF is responsible for the overall management of the fisheries sector, implementing state policy and sector development strategy, participating in the elaboration of legislation and managing fish resources in inland, territorial waters and economic zone of the Republic of Latvia.
- **Latvian Fisheries Research Institute (LATFRI)**  
LATFRI is a Public Research Institution, responsible for and carrying out fisheries research and provides the elaboration of the scientific advice concerning the sustainable exploitation and enhancement of live marine and fresh water resources.
- **Marine Environmental Board of the Ministry of Environment (MEB)**  
MEB is responsible for and performs fishery and environment monitoring and control at sea.
- **Latvian Ships Register of Maritime Administration of the Ministry of Transport of the Republic of Latvia**

Latvian Ships Register (LSR) is responsible for the registration of ships, including fishing vessels. Latvian Navigation Safety Inspection of the Latvian Maritime Administration is responsible for the re-measurement of fishing vessels.

The National Board of Fisheries is acting as a coordinator for the Programme. A Programme Steering Group will be established including members from all institutions involved in the Programme, and the main objective of the Programme Steering Group will be the supervision and coordination of the implementation of the Programme.

Primary data collected or used under the Programme will be stored in the following databases:

- **Integrated Control and Information System for Latvian Fisheries (ICIS)**, located and administered by the NBF. MEB, LATFRI and LSR enter information into the ICIS system. ICIS system includes the MINCIS subsystem to input of data on Logbooks, Landing Declarations and Notifications on the First Transaction with Fish. ICIS system incorporates, in particular, the following databases:
  - Fishing Vessel Register: data on the engine capacity of fishing vessels,
  - Logbook database: data on offshore and coastal catches, landings and on fishing effort,
  - Notifications on the First Transaction with Fish database: data on quantities landed and first sales prices.
- **Biological Data System for Latvian Fisheries (BIODATA)** located and administered by LATFRI. System included the data on biological parameters of catches, landings and discards, other biological data, scientific survey data of fish and economic data on groups of vessels.

In addition to the above-mentioned databases containing primary data, the **Latvian Fisheries Analyses Database (LFAD)** within the framework of the Programme will be established, containing the aggregated data according to the requirements of the Regulation prepared in the course of the implementation of the Programme and it will be connected both, to ICIS and BIODATA and the European Fisheries Data Collection System (EFDC). LFAD database will be located and administered by NBF.

All data collected under the Programme will be dealt with in confidence as established by Regulation. Accesses to the data will be limited to authorized staff member from the participating institutions.

### **1.1. Cooperation and task sharing between Latvia and other Member States**

Collection of information on fishing capacity, fishing effort, catch, landing and economic statistics as well as partially on biological parameters will be coordinated entirely on the national basis though biological information on catches, surveys on research vessels and information on discards in most cases will be coordinated internationally by the International Council for the Exploration of the Sea (ICES). It will be carried out in close cooperation with research institutes in EU Member States and third countries.

In the fishery economics field LATFRI participates from Latvia in the project “Economic Assessment of European Fisheries” (QLRT-2000-1502) under the Concerted Action Programme. The project has been committed to develop a common method or standard for evaluation of the economic situation in the Community and European fishery sector and to produce an Annual Economic Report on the Performance of Selected European Fishing Fleets in the years 2002-2004.

## **1.2. National Correspondent**

Latvia has assigned the National Board of Fisheries of the Ministry of Agriculture as the National Correspondent for the implementation of the Programme. The responsible Contact person is Aina Afanasjeva, the Deputy Director of the National Board of Fisheries.

## **1.3. Precision level**

The information on landings by species, catch areas, fishing effort and fishing capacity will be given on the highest possible level of precision.

For the biological information the level of precision can not be estimated at this stage. In 2005 the methods and procedures to estimate the precision of the data will be developed in co-operation with other countries and this work will be coordinated by the ICES Planning Group on Commercial Catch, Discards and Biological Sampling.

For the collection of economic information LATFRI is obliged to rely on the voluntary willingness of the fishing companies to respond to a questionnaire, therefore samples cannot be considered as truly random. Still in view of the size of the sample, which exceeds 25% of the total number of vessels, sufficient reliability can be expected. Technical characteristics of vessels obtained from questionnaires will be compared regularly with the technical characteristics of all vessels in order to assess reliability of data.

## 2. MODULE OF EVALUATION OF INPUTS: FISHING CAPACITY AND FISHING EFFORT

### 2.1. Collection of data concerning fishing capacity (C module)

#### Minimum programme

##### Parameters

The data on licensed fishing vessels registered in the LSR are included into the ICIS System and contain among other parameters the following information:

- vessel type,
- age of the vessel and main engine,
- vessel length,
- gross tonnage,
- maximum main engine power.

##### Disaggregation levels

According to the data from the Latvian Ships Register, in the beginning of 2004 the Latvian marine fishing fleet included: 12 vessels to fish in the Atlantic, 197 vessels – in the offshore of the Baltic Sea, 20 vessels - both offshore and in coastal zone, and about 700 vessels (small boats) for fishing in the coastal waters with stationary gears. The exact number of coastal boats is not yet established, as the registration of small boats and their inclusion in the Fishing Vessels Register is still ongoing.

As requested in the Appendix III of the Regulation, the Latvian fleet, based on vessel length and gear used, at present can be disaggregated into five basic segments (table 1):

- 1) Pelagic trawlers of length equal to or over 40 m,
- 2) Pelagic trawlers of length from 24 to 40 m,
- 3) Gillnetters of length from 24 to 40 m,
- 4) Pelagic trawlers of length from 12 to 24 m,
- 5) Polyvalent passive gears coastal boats of length under 12 m.

It must be emphasized, that within the segments 2 and 4 both the pelagic and demersal trawlings are taking place. However according to criterion set in the Regulation, when a fishing gear is considered to be the main fishing gear if it has been used for more than 50% of fishing time, these segments could be defined as pelagic trawlers. In 2004 the number of “pure” demersal trawlers in the Baltic Sea within the size category 24 to 40 m was below 10. As to 2005, the gears used in fishery will depend on the quotas allocated to Latvia in regard to each fish species. It must also be taken into account that, using the opportunities provided by the EU structural funds, the decrease in the number of fishing vessels has been expected from 2004. These factors could have important impact on the fleet size and structure.

Table 1 Disaggregation of Latvian fishing fleet

Vessel length		<12m	12-<24m	24-<40m	>40m
Type of fishing technique					
Mobile gears	Pelagic trawlers		+	+	+
Passive gears	Gears using hooks				
	Drift and fixed nets			+	
	Pots and traps				
	Polyvalent	+			

**Precision level**

Information defined in Commission Regulation (EC) No 2090/98 of 30 September 1998 concerning the fishing vessel register of the Community will be collected based on ICIS system. As there is no size limit of fishing vessels for the registration in the Fishing Vessel Register and all vessels involved in fishery have to be registered, a near to 100% coverage of all Latvian fishing vessels will be given.

**Extended programme**

No data collection will be carried out within the framework of the EP in 2005.

## **2.2. Collection of data related to fishing effort (D module)**

### **Minimum programme**

#### **2.2.1. Fuel consumption**

Information on the average annual consumption and expenses of fuel, expressed according to the vessel disaggregation levels required, will be collected at the end of the year by sampling method, using the questionnaire.

These data are closely related to Module J: “Collection of economic data by groups of vessels”. However, there is difference in periods assessed: data on fuel consumption collected in relation to fishing effort will be collected for the running year, but the fuel data for economic evaluation – for the previous year. This will require in 2005 the additional man/power input for fuel data collection. All segments according to Appendix III will be covered.

#### **Precision level**

Data on average annual consumption of fuel and cost per vessel on an aggregated level by segments as described in Appendix III will be collected based on questionnaires.

#### **2.2.2. Fishing effort by type of technique**

The information on fishing effort is obtained from ICIS databases.

Logbook database is a separate sub-database of ICIS and includes among other parameters the following information:

- vessel name, register number and radio signal,
- departure and arrival dates and time,
- fishing operation date and time,
- fishing operation coordinates,
- gear type used,
- catch per species for each fishing operation,
- landing per species.

First, data from coastal logbooks are inputted by LATFRI into the MINCIS subsystem, and afterwards imported into the ICIS.

Data on fishing effort by type of technique will be aggregated according to Appendix VIII of the Regulation and presented on a quarterly basis at the level 3 of geographical disaggregation.

#### **Precision level**

According the Regulation the data sampling procedures should make it possible to reach the level of precision 2 for the estimated averages by segment.

#### **2.2.3. Specific fishing efforts**

Specific fishing effort is a fishing effort defined as a sum of weighted fishing days (according to Appendix V and Chapter D.1a of the Regulation) using particular fishing method (Appendix VIII of the Regulation) when fishing in certain division (according to Appendix I of the Regulation) for certain species (Chapter D.1a (iii) and Appendix VI of the Regulation).

Information on specific fishing efforts can be provided based on the logbook data, which cover all fishing vessels.

Specific fishing efforts will be associated with stocks of special interest. According to Appendix VI of the Regulation the following species should be included in Latvian MP:

Herring (all areas),  
Sprat (all areas),

Cod (all areas),  
 Salmon (Baltic Sea),  
 Mackerel (all areas),  
 Horse mackerel (all areas).

Fishing efforts for these species will be defined as fishing days taking into account the mixed catch compositions according to criteria referred to in Appendix VI of the Regulation.

Within the section “Collection of data related to fishing effort” the following data will be collected:

DATA	SOURCE
Fuel consumption	Questionnaire
Fuel prices	Questionnaire
Number of fishing days with a particular type of gear (as defined in Appendix III and VIII)	Logbooks and Coastal Logbooks
Fishing area (as defined in Appendix I)	Logbooks and Coastal Logbooks
Period	Logbooks and Coastal Logbooks
Number of fishing days broken down by species (as defined in Appendix VI)	Logbooks and Coastal Logbooks, Notifications on the First Transaction with Fish and/or sampling
Vessel length (as defined in Appendix III)	Latvian Fishing Vessel Register

**Extended programme:**

No EP is proposed for this sector in 2005.

### 3. MODULE OF EVALUATION OF CATCHES AND LANDINGS

#### 3.1. Collection of data related to catches and landings (E module)

##### Minimum Programme

##### 3.1.1 Commercial landings of all stocks

###### Commercial catch, landing and discard monitoring

Overall annual commercial landings will be provided by species according to the level 2 of geographical disaggregation (Appendix I of the Regulation).

For stocks mentioned in Appendix XII of the Regulation the data concerning catches and landings will be disaggregated as requested by the above mentioned Appendix. The preliminary list of species based on fishing possibilities available to Latvia or quotas in 2004 is given in Table 2. The landing data will be presented as landing by weight for each segment according to Appendix III of the Regulation. It should be mentioned, that it is difficult to make prognosis about the species which Latvia will be fishing outside the Baltic Sea in 2005 as it will depend on quotas available to Latvia, economic profitability of fishing as well as on measures implemented under the new Common Fisheries Policy.

**Table 2. Preliminary list of species included into the Latvian MP according to Appendix XII, broken down by fishing areas and frequency of data collection**

Species, fishing area		ICES Division	Total catch	Discards sampling
<b>Baltic Sea: ICES area III b-d (excl. Skagerak) inc. Baltic</b>				
Yellow eel	<i>Anguilla anguilla</i>	All areas	*Q/tech	no
Silver eel	<i>Anguilla anguilla</i>	All areas	Q/tech	no
Herring	<i>Clupea harengus</i>	IIIb-d	Q/tech	no
Sprat	<i>Sprattus sprattus</i>	IIIb-d	Q/tech	no
Cod	<i>Gadus morhua</i>	IIIb-d	Q/tech	Y**
Flounder	<i>Platichthys flesus</i>	IIIa-d	Q/tech	T***
Salmon	<i>Salmo salar</i>	IIIb-d	Q/total	no
Sea trout	<i>Salmo trutta</i>	IIIb-d	Q/total	no
<b>Atlantic: NAFO 3M, 3KLMNO<sup>1</sup></b>				
Pandalid shrimp	<i>Pandalus spp.</i>	3M	**Y/tech	derogation***
Redfish	<i>Sebastes spp.</i>	3M	Y/tech	derogation
Greenland halibut	<i>Reihardtius hipoglossoides</i>	3KLMNO	Y/tech	derogation
<b>Atlantic: NEAFC (ICES XII)</b>				
Redfish	<i>Sebastes spp.</i>	XII	Q/tech	derogation

\* Q – quarterly/ tech - by type of fishing technique

\*\* Y – yearly / tech - by type of fishing technique

\*\*\*T – triennial,

<sup>1</sup>Latvia requests derogation for the collection of this data in 2005

##### 3.1.2. Discard sampling

###### Introduction

According to the Regulation, chapter 3.E.1.b, Latvia must collect the discard data in order to be able to present the total estimates of discard rates for selected species (Regulation, Appendix XII). Collection of such data for cod in the Baltic in Latvia has been going on since 1993. Systematic on board sampling of cod, flounder, herring and sprat discards took place in 1997-2001 under the EU research project “International Baltic Sea Sampling Programme for Commercial Fishing Fleets

(IBSSP)” (study projects No.96/002 and No.98/024). Since 2001 the discard sampling has been performed only on the national base and directed only to cod trawl and gillnets fishery.

### **Sampling effort broken down by fish species and areas**

Table 2 gives an overview of the species and areas for which discard estimates has to be made according to criteria set in Appendix XII of the Regulation. Discard sampling in the Baltic Sea is required for cod and flounder, as discards for other species are less than 10% of weight or 20% of catch by the number of fish. Systematic onboard sampling was carried out in Baltic herring and sprat fishery during 1997-2001 (36 days a year on average) within the IBSSP project. Results stated that no discarding of these species was recorded. It should also be taken into account, that discards of Baltic herring and sprat are prohibited by the IBSFC, as well as national fishing regulations.

The landings of eel in coastal fishery is ca 2 tons annually. Eel is being fished mainly by long-lines or as by-catch when fishing with trap-nets. Daily eel catch usually amounts only to several kilograms, therefore discard data had not been collected and its sampling is not planned for 2005.

In distant waters, according to the requirements of the Regulation, discard sampling is required yearly for Pandalid shrimps and redfish fishery in NAFO Area 3M and Greenland halibut in NAFO Area 3KLMNO, and triennially - for redfish fishery in NEAFC ICES XII Area.

The discard sampling schemes for cod under the yearly sampling level and for flounder under the triennial sampling level as given in Table 2 will be organized in a way, that sampling effort is distributed proportionally to the fishing effort and catch in different strata – relatively larger number of landings implies heavy sampling effort and relatively smaller number of landings implies less sampling effort. This will assure that the biological data are directly associated with the national landing statistics.

Latvian discard sampling will satisfy the methods laid down in internationally agreed sampling manuals within the framework of “International Baltic Sea Sampling Programme for Commercial Fishing Fleets (IBSSP)” (study projects No.96/002 and No.98/024). In these documents most relevant aspects of “at sea sampling” have been covered, including procedures for selecting fishing trips, sub-sampling procedures, recording of data, etc.

According to Appendix XII of the Regulation the sampling of cod discards will be stratified by:

- ICES division/sub-divisions – 24, 25, 26 and 28.
- quarters of the year - 4.
- 3 fishing techniques (demersal trawlers, pelagic trawlers, gill-netters).

Total expected discard samples of cod – 36.

Flounder discard sampling should take place on the triennial basis, and in 2005 discard sampling will be stratified as follows:

- by ICES subdivisions – 26 and 28.
- by quarters of the year – 4.
- by fishing techniques – 3 (demersal trawls, Danish seines in coastal areas, gill-nets).

Total expected flounder discard and length/age samples from commercial landings in subdivisions 26 and 28 in 2005 – 20, 16 samples of which must be taken from trawl and gill-net catches and 4 samples – from Danish seine catches.

Fishing will be characterised according to the gear type, mesh size and target species in order to accurately reflect the discrete discard patterns in the Latvian fishery. The number of samples for 2005 has been planned based on discard information collected during 2001-2003.

Fishing performed in various ICES Subdivisions may differ considerably in respect to duration, number of hauls per trip and handling of the catch. On average, a trip usually lasts up to 7 days. All biological information from catch will be sampled from each haul:

- total weight of discard and landing by each species caught;
- separate length distributions of discard and landing by each species caught. If the retained catch is landed in commercial weight categories, a separate length frequencies will be obtained;
- otoliths to determine the age and mean weight per each length group of cod and other selected species;
- in addition, all relevant vessel, gear and geographical information will be recorded.

Discard figures collected will be raised to the relevant Latvian yearly catch broken down by species and fishing technique by applying the ratio between discards and landings observed. Data for cod will be made available also for the ICES Baltic Fisheries Assessment Working Group.

#### **Storage of discard data**

All Latvian cod catch data sampled during the discard sampling will be entered in the BIODATA database.

Discard data from directed cod fishery are also being submitted to the international common IBSSP database FishFrame, maintained by the Danish Institute for Fisheries Research (DIFRES). This database is being used in ICES working groups to calculate discards in the Baltic Sea as well as to assess the stocks of the Baltic cod.

#### **Costs of discard sampling**

No sampling of cod and flounder is taking place at harbors or during the first sales in Latvia, and biological sampling of landings is done in parallel with the discard sampling on board of commercial vessels. Therefore the costs of cod and flounder discard sampling are included in the costs of biological sampling of catch for these species (section H of the Programme).

#### **Request for derogations:**

##### ***Redfish in NAFO 3M Area***

The Latvian TAC for 2004 is 1571 tons. Latvian landings in 2001 comprised of only 11 tons and in 2002-2003 – no fishing for redfish was exercised. Discard data in redfish fishery had not been collected so far.

Since Latvian redfish fishery in NAFO 3M Area is not regular and catch is negligible and further development of this fishery is rather difficult to foresee as well as due to the high cost of sampling, Latvia requests not to collect discard data in 2005.

##### ***Pandalid shrimps in NAFO 3M Area***

In compliance with the Effort Allocation Scheme for Shrimps Fishery in the NAFO Regulatory Area Div. 3M, Latvian catch quota for 2004 is 490 fishing days, or 8,9% of the EU share. Latvian landings in 2003 were 3533 tons. Discard data for Pandalid shrimps from NAFO Area 3M had not been collected until now. Provisional data indicate that there were no discards in 2002-2003 or their level was very low.

Latvia requests not to collect discard data in 2005 due to the high cost of discard sampling.

##### ***Greenland halibut in NAFO 3KLMNO Area***

Latvia has not got a separate TAC in this area. No Greenland halibut fishery was exercised in 2003. In 2001 – 2002 one Latvian vessel landed 291 and 11 tons of Greenland halibut respectively.

Latvia requests not to collect discard data on Greenland halibut in 2005 due to the low catch and high cost of discard sampling.

### ***Redfish in NEAFC (ICES XII) Area***

Latvia has not got a separate TAC in this area. Latvian vessels can fish here under the co-operation quota (400 tons for 2004) for NEAFC non-contracting parties. Latvian landings were 1174 tons in 2002 and 371 tons in 2003. Discard data had not been collected so far.

Latvia requests not to collect discard data in 2005 due to the high cost of discard sampling.

### **3.1.3. Data on recreational fishery for salmon in the Baltic Sea**

There is no recreational fishery of salmon in the Baltic Sea.

#### **Request for derogation:**

Due to the absence of recreational salmon fisheries in marine waters of the Baltic Sea, Latvia requests not to implement the pilot survey for salmon recreational fishery in the Baltic Sea in 2005.

### **3.1.4. Data on recreational fishery for blue-fin tuna in the Baltic Sea**

There is no recreational fishery of blue-fin tuna in the Baltic Sea.

#### **Request for derogation:**

Due to the absence of recreational blue-fin tuna fisheries in the Baltic Sea, Latvia requests not to implement the pilot survey for the blue-fin tuna recreational fishery in the Baltic Sea in 2005.

### **3.1.5. Data on recreational fishery for cod in the Baltic Sea**

There is no recreational fishery of cod in the Baltic Sea.

#### **Request for derogation:**

Due to the absence of recreational cod fisheries in the Baltic Sea, Latvia requests not to implement the pilot survey for cod recreational fishery in the Baltic Sea in 2005.

### **3.1.6. Conversion factors applied**

Conversion factors from processed to live weight are given in Table 3.

**Table 3. Conversion factors from processed weight to live weight**

Fish species	Level of processing				
	Un-gutted	Gutted	Cooked/ smoked	Skinned	Filletted
Cod	1	1.19			
Flounder	1	1.04		2	2.4
Herring	1	1.25	1.25		2
Salmon	1	1.14			2.8
Sea trout	1	1.15			
Sprat	1				
Perch	1	1.15			2
Turbot	1	1.04			

### **Extended Programme**

No data collection will be carried out in 2005 within the framework of the EP.

## **3.2. Collection of data concerning the catches per unit effort and/or effective effort of the specific commercial fleets (F module)**

### **Minimum programme**

CPUE or LPUE data in the Baltic Sea could be obtained from vessel logbooks and coastal fishery logbooks in ICIS System.

For stock assessment in ICES working groups, CPUE is usually calculated according to effective fishing time of the gear. The weighting of effort by engine power as proposed in Appendices V and VIII of the Regulation, is normally not used in the Baltic Sea area.

The Latvian commercial fishing effort and catch per unit of effort (CPUE) data are used in the assessment of the Gulf of Riga herring stock in the eastern part of sub-division 28 only since 1993. Latvia had not performed sampling of the CPUE data for other species and other fishing areas.

### ***Herring, ICES III d***

The assessment of the herring stock in the Baltic Sea ICES sub-divisions 25-29 and 32 (excluding the Gulf of Riga) is based on hydroacoustic survey indices, total catch and catch composition.

The VPA for the Gulf of Riga herring is tuned in XSA in the ICES working group by using the data on effort (number of trap-nets) directed at the Gulf herring in the Latvian and Estonian trap-net fishery and the corresponding abundance of the Gulf of Riga herring in the trap-net catches (number of individuals in each age group of the catch).

### ***Sprat, ICES III b-d***

There is one sprat assessment and management unit in the area III b-d of the Baltic Sea (ICES sub-divisions 22-32). The CPUE data are not being used in the sprat stock assessment, and assessment is totally dependent on data of hydroacoustic surveys.

### ***Cod, ICES III b-d***

Effort and CPUE data from commercial fishery are not being used in the assessment of the Western Baltic (ICES Sub-divisions 22-24) and the Eastern Baltic (ICES Sub-divisions 25-32) cod stocks. The basic information for tuning of assessment comes from BITS surveys in the first quarter of the year. In 1997 the International Baltic Sea Fishery Commission's (IBSFC) Sub-group tried to standardize fishing effort and catch per unit of effort information over the period 1994-1996 for stock assessment purposes. The results showed that the precision of data was not suited for stock assessment, and since 1997 the CPUE information has not been used in stock assessment.

Latvian effort and CPUE data by fishing gear are available and they are annually presented to the ICES Baltic Fisheries Assessment Working Group.

### ***Salmon, ICES III b-d (excluding the Gulf of Finland)***

For the assessment of salmon in the Sub-divisions 22-31 of the ICES III b-d area of the Baltic Sea (except the Gulf of Finland) information on catch in commercial fishery, total effort by gears and CPUE is collected annually from logbooks.

However, until now the CPUE information had only been used for short-term prediction of stock and to describe the fishing conditions in the economic zone of Latvia.

Latvian catch and effort data is to be incorporated into the Baltic Salmon Stock Assessment Model, developed in the ICES Baltic Salmon and Trout Assessment Working Group, starting with 2004. Time series on catch and effort data cover the years 1987-2002, both for coastal and offshore fishery. Data on salmon CPUE is included in the MP.

### **Extended programme**

No catch and effort data collection will be carried out within the framework of the EP in 2005.

### **3.3. Eligibility of the scientific evaluation surveys of stocks (G module)**

#### **Minimum programme**

Latvia, according to the requirements of the Regulation, Appendix XIV, is performing and during the 2005 will undertake four priority 1 surveys in the Baltic Sea. All these surveys are internationally coordinated. The planning and co-ordination of the surveys are done in the ICES Baltic International Fish Surveys Working Group. The previous surveys designs by Latvia will be continued.

Latvia has no fisheries research vessel. Therefore the surveys will be performed on the rented foreign research or Latvian fishing vessels.

#### **3.3.1. Baltic International Trawl Survey (BITS), first/fourth quarter, ICES IIIaS, IIIb-d**

##### **3.3.1.1. BITS survey, I quarter**

According to the Regulation, this survey is classified as a Priority 1 survey.

The survey is and will be conducted in March in the Baltic Sea (10 days at sea) on the rented fishing vessel. The survey is covering the ICES sub-divisions 26 and 28 of the area III d.

The primary purpose of the survey is to develop indices for recruitment and abundance of the Eastern cod in the Baltic Sea, necessary for stock assessment. The abundance estimate is obtained in collaboration with Denmark, Germany, Poland, Russia and Sweden within the framework of ICES.

The cod length, weight, sex and maturity are determined on board and age determination performed at LATFRI laboratory.

The primary data of Latvian survey are stored in the BIODATA database, as well as in ICES BITS database.

##### **3.3.1.2. BITS survey, IV quarter**

The survey is and will be conducted in November in the Baltic Sea (10 days at sea) on the rented fishing vessel. The survey is covering the ICES sub-divisions 26 and 28 of the area III d.

The primary purpose of the survey is to develop indices for recruitment and abundance of the Eastern cod in the Baltic Sea, necessary for stock assessment. The abundance estimate is obtained in collaboration with Denmark, Germany, Poland, Russia and Sweden within the framework of ICES.

The cod length, weight, sex and maturity are determined on board and age determination performed at LATFRI laboratory.

The primary data of the Latvian survey are stored in the BIODATA database, as well as in the ICES BITS database.

#### **3.3.2. Sprat acoustic survey, II quarter, ICES IIIc-d**

The survey is and will be conducted on a rented foreign research vessel in May (10 days at sea) in the Baltic Sea in the ICES sub-divisions 26 and 28 of the area III d.

The purpose of the survey is to provide the data for abundance and distribution estimates of sprat in the Baltic Sea.

The sampling procedure is carried out according to the method defined in the “Manual for the Baltic International Acoustic Surveys” (ICES CM 1994/H:3).

The acoustic abundance estimate is obtained within the framework of ICES in collaboration with Denmark, Estonia, Germany, Poland, Russia and Sweden. The sprat length, weight, sex and maturity are determined on board and age determination performed at LATFRI laboratory.

The primary data of Latvian survey are stored in BIODATA System. Aggregated data are reported to and used annually by relevant ICES Working Groups.

### **3.3.3. Herring acoustic survey, III - IV quarter, ICES IIIa, IIIb-d**

The purpose of the survey is to provide data for abundance and distribution estimates of herring and sprat in the Baltic Sea performed by ICES working groups.

To have the maximum coverage, the survey is built up of 3 parts:

- 1) survey in the Latvian Economic zone;
- 2) survey in Territorial waters;
- 3) survey in the Gulf of Riga.

The 1<sup>st</sup> part of the survey in the Latvian economic zone is and will be conducted on rented foreign research vessel during the October-November (10 days at sea) in the ICES sub-divisions 26 and 28 of the division III d of the Baltic Sea.

The 2<sup>nd</sup> part extends the herring acoustic survey to 12 miles Latvian territorial waters of the open sea in the sub-divisions 26 and 28 in the area III d of the Baltic Sea (5 days at sea) where it is carried out during October-November on the rented Latvian fishing vessel.

The 3<sup>rd</sup> part is covering the Gulf of Riga and is and will be conducted on the rented fishing vessel during July-August (10 days at sea).

The sampling procedure is carried out according to the methods defined in the “Manual for the Baltic International Acoustic Surveys” (ICES CM 1994/H:3).

The acoustic herring and sprat abundance estimate is done within the framework of ICES in collaboration with Denmark, Estonia, Germany, Poland, Russia and Sweden. The herring and sprat length, weight, sex and maturity are determined on board and age determination performed at LATFRI laboratory. The primary data of survey are stored in BIODATA System. Aggregated data are reported to and used annually by relevant ICES Working Groups. Since 2000, data have also been stored in the internationally coordinated database (EC 99/06) DFU in Hirtshals, Denmark.

Herring acoustic survey in III quarter in the Gulf of Riga is a part of the herring acoustic survey in III quarter in the area IIIa, IIIb-d. The survey covers part of ICES sub-division 28 of the area III d. The purpose is to provide the acoustic abundance and distribution estimates of the Gulf of Riga herring stock. Since 1993 this stock is assessed and advised by ICES as a separate stock. Since 2003 IBSFC performs a management regime for the Gulf of Riga herring stock which is different from herring in the other parts of area III d IBSFC. In 2004 the European Commission has established the separate TAC for the Gulf of Riga herring stock.

The acoustic abundance estimate for the Gulf of Riga stock is obtained in collaboration between Latvia and Estonia.

#### **3.3.4. Coordination and quality assurance**

The BITS and the herring and sprat acoustic surveys are internationally coordinated surveys, what ensures a high level of consistency in sampling procedures among participants. As a part of this, exchange of staff on board research vessels between countries will be conducted. It is believed that this is an important contribution which will ensure the harmonisation of methods and quality of survey data.

#### **Extended Programme:**

No data collection will be carried out within the framework of the EP in 2005.

### **3.4. Biological sampling of catches: composition by age and by length (H module)**

#### **Minimum programme**

Until now LATFRI had performed the research only in the Baltic Sea to meet the requirements of ICES Working Groups for the assessment of the Baltic herring, sprat, cod, salmon and sea trout stocks, as well as to collect the necessary biological information for national fisheries regulation of local fish stocks.

In 2005 the standard sampling procedure will be carried out on a monthly basis by ICES stock assessment units. For herring, sprat, salmon and sea trout sampling will take place in fishing harbors, collecting the random samples from unsorted catches. For herring and sprat also some sampling will take place on board the commercial fishing vessels. Cod will be sampled only on the commercial fishing vessels at sea. The age determination will take place in the laboratories of LATFRI according to the standardized methods.

At present the LATFRI sampling frequency of catch composition by age and by length for all relevant fish species in the Baltic Sea is exceeding the requirements of the Regulation. In 2005 LATFRI is planning to keep the present sampling frequency, since it is not known how a decrease of the number of collected samples could influence the assessment quality.

#### **Landings by foreign vessels in Latvian harbors**

9 foreign vessels landed 502 tons of herring and 2 434 tons of sprat in 2003. Biological data from these landings had not been collected. According the MP sampling scheme of the Regulation, Latvia must collect one length/age sample (1 sample - 100 fish for length and 50 fish for age) only for sprat. Due to the relative small landings of foreign vessels in Latvian harbors until now and unclear trends of these landings in 2005, when the Latvian Economic zone will be opened for Community fishing vessels, it is difficult to plan any biological sampling on this segment. Depending on situation relevant sampling will be organised or data will be collected in the way of cooperation with institutes of countries which vessels land fish at Latvian ports.

The biological sampling of catches taken outside the Baltic Sea until now had not been done, as LATFRI had not got relevant human resources and respective additional financial means.

The active fishing in NAFO, NEAFC and other areas was performed by 10 fishing vessels flying the Latvian flag. In 2001-2003 these vessels reported landings of 10 dominating fish species and Pandalid shrimps, landed in harbors of other countries.

The precision levels for the length and age composition of the catches will be determined according to the guidelines recommended by the Workshop on Sampling and Calculation Methodology for Fisheries Data (ICES 2004) and further elaboration of these issues by ICES. The results of this analysis will be used for the improvement of the Programme in the future.

#### **3.4.1 The Baltic ICES area III (excluding Skagerrak)**

##### ***Herring (*Clupea harengus membras*), ICES III d***

There are two herring management units in the Baltic Sea defined by the IBSFC. Latvian fishery is conducted only on the herring of the management unit of ICES sub-divisions 22-29S +32 of the area III d.

However, in 2004 the two separate TACs within the management unit of sub-divisions 22-29S +32 were established by European Commission: one for sub-divisions 25-29S+32 (excluding the Gulf of Riga) and one for the Gulf of Riga. In 2004 the Latvian quota in the Sub-divisions 25-29S+32 (excluding Gulf of Riga) is 2 704 tons or 2.18% from the total Community share and in the Gulf of Riga - 21 130 tons or 53.82% from the total Community share of the TAC, obliging Latvia to sample these stocks.

Main Latvian herring catch is taken in the ICES Sub-divisions 26 and 28 and there are two Baltic herring stocks (two assessment units according to ICES): herring stock in sub-divisions 25-29S, +32 (excluding Gulf of Riga) and the Gulf of Riga herring stock in sub-division 28. In 2001-2003 the average total Latvian landing of herring was 25 374 tons.

As it is foreseen, in 2005 the management of the herring in the sub-divisions 25-29S + 32 (excluding the Gulf of Riga) and in the Gulf of Riga will be carried out by separate TACs, therefore each of these stocks has to be covered by separate sampling of biological data of landings.

#### ***Herring in Sub-divisions 25-29+32 (excluding the Gulf of Riga)***

In 2001-2003 the average Latvian catch of herring in the sub-divisions 26 and 28 (excluding Gulf of Riga) was 2 999 tons. During 1990s the herring catches in sub-divisions 26 and 28 were absolutely (on average - 8 700 tons) and relatively (35%) higher, but afterwards had strongly decreased due to low stock level of herring in sub-divisions 25-29 +32 excluding the Gulf of Riga and correspondingly - low Latvian quota. In 2002-2004 according to national regulations the directed herring fishery in sub-divisions 26 and 28 was prohibited, and herring was allowed to be caught only as a by-catch in sprat pelagic fishery. It is forecasted that in 2005 a low level of about 4 000 tons of herring catches will remain in sub-divisions 25-29 +32 excluding the Gulf of Riga. According to MP in the Regulation only one sample per quarter should be taken, that will hardly give some scientifically reliable information.

#### **Request for derogation:**

Latvia requests to increase in its 2005 MP the total number of herring length/age samples from landings to 12 as compared to 4 samples when the Regulation criteria applied (Table 4).

Taking into account the quality of stock assessment and deep concern on the species composition in the mixed pelagic fishery in the sub-divisions 25-32 (excluding the Gulf of Riga), Latvia proposes that it is necessary to follow the former sampling frequency, collecting at least 1 sample per month, in total – 12 samples, including 6 onboard samplings during the year, and to accept this sampling scheme in the Latvian MP.

#### ***Gulf of Riga herring (*Clupea harengus membras*)***

In the Gulf of Riga (part of the sub-division 28) 91% (21 780 tons) of the total Latvian herring landings were taken in 2003. The Gulf of Riga is inhabited by herring population, assessed by ICES as a separate stock since 1993. Herring in the Gulf of Riga is caught by pelagic and demersal trawls as well as herring trap-nets in the coastal waters. The trawl fishery takes place all year around except the 30 days of the herring fishery ban during May-June, aiming the protection of the herring mass spawning. In cold winters the fishery could be stopped because of ice coverage, usually from February till mid-April. The trap-net fishery is taking place from the mid-April till mid-July during the herring spawning period. Trap-net fishery constitutes about 15% of the total herring catch in the Gulf of Riga. As the trawl and trap-net fisheries have different exploitation patterns, they need to be sampled separately.

Historically Latvia had collected monthly random samples from landings taken in different parts of the Gulf of Riga, to estimate the age composition of herring in trawl catches. Herring samples were

collected mainly in fishing harbors and in smaller amounts - also on board the commercial fishing vessels. The total number of samples per year was about 36. Following the Regulation sampling scheme for MP, the Latvian sampling frequency should be lower (Table 4).

From trap-net catches historically 4 random herring samples had been collected in different fishing harbors every 10 days, resulting in total of 30-36 samples per spawning season. As the CPUE data series from herring trap-net fishery are used in ICES to tune the analytical assessment of this stock, the trap-net fishery needs to be sampled more frequently, than requested by the Regulation. High sampling frequency is also necessary due to the substantial fluctuations of the herring landings age and size composition during the spawning season. The character of the catches could differ significantly between the different parts of the Gulf and between the different years due to the specific hydro-meteorological conditions.

**Request for derogation:**

Latvia requests to increase in its 2005 MP the total number of herring length/age samples from herring landings in the Gulf of Riga to 49 as compared to 22 samples, requested by the Regulation criteria (Table 4).

It is necessary to safeguard the quality of data for the separate assessment of the Gulf of Riga herring stock. Latvia proposes to keep in its MP the previous sampling scheme of herring landings from the trap-net fishery, collecting random samples from four parts of the Gulf of Riga every 10 days. This results in 30 samples a year in total. From trawl landings at least 19 samples must be collected.

***Sprat (Sprattus sprattus), ICES IIIb-d***

There is one sprat management unit in the Baltic Sea in Sub-divisions 22-32. In 2004 the Latvian quota is 13,8% from the total Community share of the TAC, obliging Latvia to sample this stock.

In 2001-2003 the average total Latvian landing of sprat by pelagic trawlers was 44 017 tons, of which 96.2% were taken in the Latvian Economic zone in the sub-divisions 26 and 28 of the area ICES III d. The national quota for sprat in 2002 was utilized by 100% and in 2003 - by 98.4%. In 2004 the Latvian sprat quota is 52 249 tons. As the last three sprat year-classes have been abundant, evidently, the sprat stock in 2005 will remain on a high level, and the national quota will be at least as high as in 2004. Therefore the possible sprat landing in 2005 is forecasted to be at the level of national quota in 2004.

To estimate the age composition of sprat in trawl catches, historically LATFRI had collected at least 3 random samples monthly from the subdivisions 26 and 28 of the area III d. The total number of samples per year was approximately 40-45. Samples are collected in fishing harbors and sometimes on board commercial fishing vessels when LATFRI specialists take part in the process of commercial fishery.

In the Programme the Regulation sampling scheme of MP will be followed (Table 4).

***Cod (Gadus morhua), ICES III b-d***

The Latvian landings of cod in the Baltic Sea in 2003 were 4 634 tons. During years 2000-2002 the average Latvian landing was 5 478 tons or 7.1% of the Community TAC share, thus obliging Latvia to sample this stock.

Almost all types and sizes of vessels are engaged in the cod fishery, and the gears used are bottom trawls and gillnets. The fishery is exclusively directed towards the cod, and only by-catch of flounder may occur. In pelagic trawl fishery cod could be as a by-catch in sprat and herring fishery.

The sampling of cod landings will follow the standard sampling scheme, and as previously will be performed at sea on board of trawlers and gill-netters. Length and age sampling is associated with cod discard sampling and cover same sub-divisions of the Baltic Sea, fishing gears and quarters (see chapter 3.1.2). The cod biological sampling will be performed in parallel to discard sampling and the number of samples in relation to Section E (36 samples, 1800 fishes measured and 900 fishes aged) exceeds the number of samples which should be collected according to the scheme specified in the Regulation (24 samples, 1200 fishes measured and 600 fishes aged). Therefore sampling of cod length/age at harbors is not planned.

**Table 4. Sampling effort by species and area based on Latvian landings, MP**

Species, type of fishing	Baltic Sea ICES Area	Total EU TAC in 2004, tons	Latvian TAC in 2004, tons	Latvian TAC, % of EU TAC	Average Latvian landings 2001-2003, tons	Sampling frequency rules <sup>1</sup>			Latvian Programme 2005		
						No of samples per tons	No of fish measured per sample	No of fish aged per sample	As required by Regulation / as requested by derogation <sup>2</sup>		
									Minimum No of samples	Minimum No of individuals measured	Minimum No of fish aged
Herring, trawl fishery	IIIId, Gulf of Riga	-	-	5.74	19034	1/1000	100	100	19/-	1900/-	1900/-
Herring, trap-net fishery	IIIId, Gulf of Riga				3341	1/1000	100	100	3/30	300/3000	300/3000
Herring, trawl fishery	IIIId, 26, 28	171 350	9 834		2999	1/1000	100	100	4/12	400/1200	400/1200
Sprat, trawl fishery	IIIId, 26-28	152 376	52 247	12.44	44 017	1/2000	100	50	26/-	2600/-	1300/-
Cod, trawl & net fishery	IIIId, 26-28	61 600	4 710	7.1	5 478	1/200	50	25	24/36 <sup>4</sup>	1200/1800	600/900
Salmon, offshore net fishery	IIIId, 26, 28	48 3005 <sup>3</sup>	59 478 <sup>3</sup>	12.31	77	1/100	50	50	2/3	100/300	100/300
Salmon, coastal fishery	IIIId, 28				49	1/100	50	50	1/3	50/300	50/300
Sea trout, coastal fishery	IIIId, 26, 28	-	-	-	6	1/100	50	50	0/3	50/300	50/300
Flounder, offshore trawl and net fishery, coastal fishery	IIIId, 26, 28	-	-	-	653	1/100	50	50	6/20	300/1000	300/1000

1) As specified in the Regulation, 2) Justification – see in the text, 3) In numbers of fish , 4) Samples are taken during the discard sampling onboard of vessels

**Table 5. Sampling effort by species and area based on Latvian landings, EP**

Species, type of fishing	Baltic Sea ICES Area	Average Latvian landings 2000- 2003, tons	Sampling frequency rules <sup>1</sup>			Latvian Programme 2005			
			No of samples per tons	No of fish measured per sample	No of fish aged per sample	No of samples <sup>1</sup>	Requested derogation, No of samples <sup>2</sup>	No of fish measured <sup>2</sup>	No of fish aged <sup>2</sup>
Pikeperch, coastal fishery	IIIId, Gulf of Riga	24	1/100	50	50	1	6	300	300
Turbot, offshore net fishery, coastal fishery	IIIId, 26, 28	10	1/100	50	50	1	4	200	200
Perch, coastal fishery	IIIId, 26, 28	48	1/100	50	50	1	6	300	300

1) As specified in the Regulation, 2) Justification – see in the text

### ***Salmon (Salmo salar), ICES III b-d***

All Latvian commercial catch of salmon in the Baltic Sea is taken from the IBSFC salmon management unit of Main Basin and the Gulf of Bothnia in the area IIIb-d (sub-divisions 22-31).

The fishery is performed in the sub-divisions 26 and 28, including the Gulf of Riga. In this area two principal types of fishery are engaged, with totally different catch age and length composition. In the offshore fishery, the drift-nets are used to capture feeding salmon in autumn - spring (September-May), while in the coastal fishery the trap-nets and anchored gill-nets are used to capture mature salmon, returning to home rivers in summer and autumn (June-November). Specific technical measures according to the national fishery rules are taken to manage both these fisheries.

In 2001-2003 the Latvian commercial landings of salmon averaged 126 tons. For the evaluation of the length and age composition of landings, a sampling scheme of C3 according to Appendix XV of the Regulation will be required (1 sample of 50 fish/ 100 tons). The salmon catches in the sea as well as in coastal waters actually consist of wild and hatchery reared components. Taking into account the migratory and distribution pattern, the MP must cover all the main seasons and areas of the offshore and coastal fisheries.

The sampling of salmon in ICES sub-divisions 28 and 26 will be carried out from commercial landings in Latvian fishing harbors Ventspils and Liepaja.

In the Gulf of Riga there is ban for offshore salmon fishery, but the effort of coastal trap-net and anchored gillnet fishery is high. The sampling of salmon migrating to spawning is based on the coastal commercial landings in the Gulf of Riga in two sites: the Terminal Fishery Area for hatcheries origin salmon (in the outfall zone of river Daugava) and the River Salaca outfall area - for wild salmon. During summer the pre-migratory salmon will be sampled, but in the autumn - the pre-spawning one. The stock composition analysis and the identification of wild and reared salmon are based on the scale reading method, requiring an appropriate sample size.

#### **Request for derogation:**

Latvia requests to increase the number of salmon samples in 2005 MP up to 6 as compared with 1 sample required under the Regulation scheme. The minimum number of 100 fish/sample is required for length measurements, as well as to determine age and origin of wild/reared populations.

Taking into account that the MP must cover the basic data needed for the assessment of salmon stock on both types of fishing (offshore and coastal), more intensive sampling is needed. The ICES Working Group on Baltic Salmon and Trout Stock Assessment 2003 has stated that during the last decade salmon landings decreased in the Baltic Sea more than twice. This was caused by a complex of reasons - low post-smolt survival, unregistered catches, seal predation.

Therefore at least 3 samples per fishing season (September-May) are needed from offshore fishery and 3 samples (2 from Gulf of Riga and 1 from the Baltic Sea coastal fishery) – from coastal fishery (Table 4). Each sample must contain 100 individuals in order to ensure the necessary level of reliability.

### ***Sea trout (Salmo trutta), ICES III b-d***

Sea trout is traditional target species of Latvian coastal fishery in ICES sub-division 28. There is no catch quota for sea trout.

In spring the young feeding sea trout is caught by gill-nets, but in autumn the pre-spawning fish - by trap-nets. The most of local sea trout populations are small. The reported annual landing of sea trout in Latvian coastal waters was 6 - 13 tons in 2001- 2003.

**Request for derogation:**

Latvia requests to include 3 sea trout samples in 2005 MP. The proposed sample size is 100 fish individually measured, to determine the age and origin of wild/reared populations (Table 4).

According to Appendix XV of the Regulation the MP sampling scheme should contain 50 samples on 100 tons of sea trout what is insufficient for the sea trout stocks assessment and stocks management. The proposed Latvian sampling within the MP will include 1 sample in spring and 1 in autumn from the Gulf of Riga coastal fishery and 1 sample from coastal area of sub-divisions 26 and 28. Each sample must contain 100 individuals in order to ensure the necessary level of reliability.

***Flounder (Platichthys flesus), ICES IIIb-d***

The Latvian commercial landings of flounder are taking place in ICES sub-divisions 26 and 28 of the area III d. In 2001-2003 the average landing was about 653 tons annually. The flounder mainly is fished by demersal trawls (35%), gillnets (20%) and Danish seines (20%).

The sampling of flounder landings follows the standard sampling scheme, and is performed on board of commercial trawlers and gill-netters. Length and age sampling is associated with flounder discard sampling, following the same disaggregating level (see Section 3.1.2).

The flounder biological sampling is performed parallel to discard sampling, and the number of samples in relation to Section E (20 samples, 1000 fish measured and 1000 fishes aged) is exceeding the number of samples according to Section H (6 samples, 300 fish measured and 300 fish aged). Therefore the market and harbor length/age sampling of flounder is not planned.

**3.4.2 Atlantic NEAFC ICES area XII, NAFO areas 3M and 3KLMNO*****Redfish (Sebastes spp.), NEAFC XII Area***

Latvia has not got TAC in this area. The Latvian vessels can fish there within the framework of co-operation quota (400 tons in 2004) for NEAFC non-contracting parties. Latvian landings were 1174 tons in 2002 and 371 tons in 2003. Biological data had not been collected. According the MP sampling scheme of Regulation Latvia must collect 6 length samples (1 sample - 100 fish) and 2 age samples (1 sample - 50 fish).

**Request for derogation:**

As Latvian fishing in this area has a trend of reduction of catches, and due to the high cost of sampling, Latvia requests not to collect length – age data and other biological data in 2005.

***Redfish (Sebastes spp.), NAFO 3M Area***

The Latvian TAC for 2004 is 1571 tons, but Latvian landing in 2001 was only 11 tons and in 2002-2003 – no fishing. It is difficult to forecast the development of this fishery in 2005. Biological data were not collected.

**Request for derogation:**

As Latvian fishing in this area is not regular and catches are negligible, as well as this fishery is rather difficult to foresee, and due to the high cost of sampling, Latvia requests not to collect length – age data and other biological data in 2005.

***Pandalid shrimps (Pandalus spp.), NAFO 3M Area***

In compliance with the Effort Allocation Scheme for Shrimps Fishery in the NAFO Regulatory Area Div. 3M, Latvian fishing quota for 2004 is 490 days, or 8,9% of the EU share. The Latvian landings in 2003 were 3533 tons. Biological data for Pandalid shrimps from NAFO Area 3M were not collected until now. According to the Regulation MP sampling scheme Latvia must collect 18 length samples (1 sample - 100 specimens).

**Request for derogation:**

Latvia requests not to collect biological data from the landings of Pandalid shrimps caught in NAFO 3M Area in 2005 due to the high cost of sampling.

***Greenland halibut (Reinhardtius hipoglossoides), NAFO 3KLMNO Area***

Latvia has not got TAC in this area, but Latvian vessels can fish within the framework of quota for others countries - NAFO non-contracting parties. In 2001– 2002 only one Latvian vessel was fishing for that species and landed 291 and 11 tons respectively. In 2003 there was no fishing. Latvia had not collected biological data so far. According to the MP sampling scheme set in the Regulation Latvia must collect 5 length samples (1 sample - 100 fish) and 1 age sample (1 sample - 50 fish).

**Request for derogation:**

As Latvian fishing in this area is not regular, having a trend to reduction, and due to the high cost of sampling Latvia requests not to collect length – age data and other biological data in 2005.

**Extended programme**

***Turbot (Psetta maxima), ICES III d***

The Latvian commercial turbot landings are low. In 2003 the catch was below 10 tons. Taking into account the critical stock's state, the turbot fishery beyond the 2 miles coastal zone is banned by national regulation. Therefore turbot mainly is taken by large mesh-size gill-net fishery in the coastal zone.

**Request for derogation:**

Taking into account the critical state of the turbot stock, the high market value of this species, and assuming that the EP sampling scheme according to the Regulation criterion C3 (Appendix XV; 1 sample of 50 fish/100 tons) would be insufficient for turbot stocks assessment and fisheries regulation, Latvia proposes to keep in EP the existing sampling frequency - 4 turbot samples (200 fish individually measured and aged, Table 5). The samples will be taken on board and the sampling scheme is simple random sampling.

***Perch (Perca fluviatilis), ICES III d***

Most of the commercial perch catches are taken in the Gulf of Riga in April - September with trap-nets (60%) and gill-nets (30%). Average landing for 2001-2003 was 48 tons. There is no catch quota for perch, but the fishery is regulated by the limitation of the number of the fishing gears.

**Request for derogation:**

Assuming that the EP sampling scheme according to the Regulation criterion C3 (Appendix XV; 1 sample of 50 fish/100 tons) would be insufficient for perch stocks assessment and fisheries regulation, Latvia proposes in its EP include 6 samples (300 fish measured and aged, Table 5).

***Pike-perch (Stizostedion lucioperca), ICES III d***

The total reported catch of pike-perch in Latvian marine waters averaged 24 tons in 2001-2003, landed from coastal trap-net (55%) and gill-net (45%) fishery in the coastal zone of the Gulf of Riga. There is no catch quota for pike-perch, but the fishery is regulated by the limitation of the number of the fishing gears.

**Request for derogation:**

Assuming that the EP sampling scheme according to the Regulation criterion C3 (Appendix XV; 1 sample of 50 fish/ 100 tons) would be insufficient for pike-perch stocks assessment and fisheries regulation, Latvia proposes in its EP to include 6 samples/year (300 fish measured and aged, Table 5).

## **3.5. Other biological samplings (I module)**

### **Minimum programme**

#### **3.5.1. Baltic ICES area III (excluding Skagerrak)**

Data concerning the growth and maturity (herring, sprat, cod, salmon and sea trout) are collected regularly during biological sampling of the catches and could be compiled and forwarded to the Commission by its request.

#### **Growth curves and the relations between age/length and maturity**

##### ***Herring and sprat***

Data concerning weight, length, sex and maturity are recorded when performing the biological analysis of catch or landing samples. Sex and maturity are not recorded only in case of on board sampling, when only the total weight by length class is recorded.

##### ***Cod***

The growth curves, age/length relationship as well as maturity are available from on board biological sampling of the catches per different fishing gears in the Baltic Sea ICES area III. During the on board sampling on fishing vessels, the biological analysis of cod by 5 cm length classes is performed. In each length class ca. 30 fishes are weighed, the sex and maturity stage determined, and otoliths for age determination taken. In total this results in biological analysis of about 300 fishes per commercial trip.

##### ***Flounder***

The growth curves, age/length relationship as well as maturity are available from on board biological sampling of the catches per different fishing gears in the Baltic Sea area III. During the on board sampling on fishing vessels, the biological analysis of flounder by 1 cm length classes is performed. In each length class ca. 10 fishes are weighed, the sex and maturity stage determined, and otoliths for age determination taken. In total this results in biological analysis of about 100 fishes per commercial trip.

##### ***Salmon and sea trout***

Data to derive growth curves and relations between age/length for salmon and sea trout are accumulated from the basic landings sampling programme and tag recaptures data.

#### **Sex-ratio in landings**

Data concerning the sex-ratio of herring, sprat, cod, salmon and sea trout landings will be compiled every third year, as requested by the Regulation (Appendix XVI).

##### ***Herring and sprat***

The sex of herring and sprat is recorded for all the individuals in harbor samples together with other biological information.

##### ***Cod***

The sex-ratio of cod is available from onboard biological sampling of the catches by fishing gear for Baltic Sea area III.

### ***Salmon***

During the sampling of salmon landings in the coastal fishery, sex of fish is determined and recorded routinely. In samples from offshore fishery the sex is not determined because sampling is performed in fishing harbors on gutted fish.

### **Precision estimation**

The precision levels for the biological parameters will be determined according to the guidelines recommended by Workshop on Sampling and Calculation Methodology for Fisheries Data (ICES 2004) and further elaboration of these issues by ICES. The results of this analysis will be used for the improvement of national sampling programme in the future.

### **3.5.2. Atlantic NEAFC ICES area XII, NAFO areas 3M and 3KLMNO**

Request for derogation not to sample biological data in these areas is justified in Section 3.4.2. of the Programme.

### **Extended programme**

Extended Programme is not planned in 2005.

## **4. MODULE OF EVALUATION OF THE ECONOMIC SITUATION OF THE SECTOR**

### **4.1. Collection of economic data by groups of vessels (J module)**

#### **Minimum Programme**

This section covers the information as defined in Appendix XVII of the Regulation, and will be completed from two sources of data. The first source will be the Logbooks and Fishing Vessels Register (FVR) data bases in the ICIS System and the second - the sample surveys performed by LATFRI.

The extract from ICIS, containing the information on all vessels, fishing in the previous year will form the basis for analysis and stratification of the fleet before the sample survey is performed. The collected data will form the basis for reporting on the economic situation for the groups of vessels.

#### **Data for basic economic evaluation**

##### *1) Statistics based on FVR and Logbooks data:*

- Vessel data. The physical data of vessels are recorded according to the ICIS FVR, including the number of vessels, length, gross tonnage (GT), main engine power (kW) and age of vessel and of main engine.
- Effort. Vessel activity measured as days at sea according to the ICIS Logbooks database.

##### *2) Sampling by questionnaires:*

- Prices: quarterly data on prices from the ICIS Notifications on the First Transaction with Fish database. Data on prices will be verified using questionnaires data.
- Income / turnover: calculated value of production by species.
- Production costs: labor costs, fuel, vessel repairing and maintenance, other operational costs.
- Fixed costs: depreciation calculated individually by a fixed percentage based on expected lifetime.
- Financial position: own capital / borrowed capital.
- Invested capital: book value (replacement value) of fishery assets at the beginning of the year. Insured values could also be included, but must be considered second best to the book value (replacement value).
- Employment: calculated number of employed on vessels (part time / full time).

#### **Compiling sample statistics**

LATFRI compiles economic data based on questionnaires, drawn up by LATFRI, to owners of the fishing firms. The participation of the responders is on voluntary basis, established by a previously given promise not to discover the commercial confidence of an individual firm or vessel.

Data on each company will be tested by LATFRI, and all errors and ambiguities will be addressed and verified in cooperation with the responding person, before data is approved for statistical use.

The Questionnaire Form includes all specifications needed for the MP, as well as some additional, more detailed information. In cases, when the fishing firm owns few operating vessels, samples will include the calculation of costs of the each individual vessel.

The fleet segmentation takes place as defined in Appendix III of the Regulation. The following Latvian fishing fleet segments are to be analysed (segmentation – according to the situation in the 2002-2003):

- 1) Pelagic trawlers of length equal to or over 40 m;
- 2) Pelagic trawlers of length from 24 m to 40 m;
- 3) Pelagic trawlers of length from 12 to 24 m,
- 4) Gillnetters of length from 24 to 40 m,
- 5) Polyvalent passive gears coastal boats of length under 12 m.

Analysis of the economic performance of Latvian fishing fleet, carried out since 2001, covered only vessels fishing in the Baltic Sea outside coastal waters. The Programm will include also the coastal segment as well the vessels fishing in Atlantic.

It must also be taken into account that, using the opportunities provided by the Financial Instrument for Fisheries Guidance (FIFG), the decrease in the number of fishing vessels has been expected from 2004. It may significantly influence the size and structure of the fishing fleet in 2005.

#### **Data reliability**

For the results calculated from a sample instead of data for all vessels in a segment, the reliability of the results will be tested on the basis of the relative standard error and the t-test.

The total population (number of vessels in a given fleet segment) is compared to the number of vessels in the sample.

The precision level or the uncertainty of the results cannot be calculated by approximation to a distribution function, because it is not possible to carry out a random sampling. The element of voluntary participation has the result, that only a part of each stratum is available for selection.

Through the contacts to the fishing firms, and acceptance by owners to participate in the statistics, LATFRI has recently succeeded in gaining a 20-28% coverage in the number of vessels in each segment. This strategy will be followed up by selective enquiries to recruit fishermen in the strata where the participation needs an improvement.

#### **Submission of data**

All information will be aggregated to the harmonized variables as specified in the Appendix XVIII of the Regulation. Data will be prepared for each fleet segment, fleet as total and as average per vessel.

#### **Extended programme**

No Extended Programme proposed for 2005.

### **4.2. Collection of data concerning the processing industry (K module)**

In 2005 Latvia is not implementing the collection of economic data concerning the processing industry. Preparatory investigations will be initiated to start the implementation of this requirement set in the Regulation with 2006.

## **5. COORDINATION OF THE DATA COLLECTION**

### **5.1. National coordination**

The overall coordination of the implementation of Programme will be carried out by the National Board of Fisheries of the Ministry of Agriculture of the Republic of Latvia.

The main Programme implementing institutions are located in Riga, therefore the special coordination arrangements for the national coordination of the Programme will not be needed.

### **5.2. International coordination**

International co-ordination and co-operation will be achieved at different levels through:

- direct contacts with experts from other institutes (particularly – Denmark, Sweden, Poland, Estonia as well as Russian Federation), who are responsible for sea surveys and stock sampling programmes directly linked to the Latvian Programme.
- ICES Working, Study and Planning Groups on data gathering and sea surveys.
- ICES Assessment Working Groups, since these activities cover issues that are directly related to data gathering, biological sampling or sea surveys. Following the Commission's guidelines on the eligibility of costs for meetings, however, the costs for attending these Assessment Working Groups are not included in the Programme coordination budget.
- regional coordination.
- STECF Sub-Groups on data gathering, precision levels, databases, etc., such as the Sub-Group on Research Needs (SGRN), the Ad hoc Sub-Group on Precision Levels, the Ad hoc Sub-Group on Database Formats, etc.

In relation to the planning and methodological development of data collection, the participation of Latvian experts in the respective all levels international meetings in 2005 is planned and approximate necessary budget calculated. The following draft list of relevant coordination meetings, that might take place in 2005 and which terms of reference, composition and venue were still unknown at the time this Programme was written, has been prepared based on 2004 meetings plan:

1. ICES Planning Group on Commercial Catch, Discards and Biological Sampling;
2. ICES Study Group on Ageing Issues in Baltic Cod;
3. ICES Study Group on Salmon Scale Readings;
4. ICES Study Group of Target Strength Estimation in the Baltic Sea;
5. ICES Baltic International Fish Survey Working Group;
6. Workshops not yet defined – 3 meetings.

## **6. LATVIAN FISHERIES ANALYSIS DATABASE**

As it was mentioned in the Introduction part of this Programme, the primary data used for or collected under the Programme will be stored in the following databases:

- Integrated Control and Information System for Latvian Fisheries (ICIS) – capacity, fishing effort, catch and landing data and data on the first sales prices;

- Biological Data System for Latvian Fisheries (BIODATA) – biological data on catches, landings and discards, other biological data and economic data on fishing vessels.

**Latvian Fisheries Analyses Database (LFAD)** with linkages to ICIS and BIODATA systems will be created within the framework of Programme for the aggregated data required by the Commission Regulation. LFAD will be connected to European Fisheries Data Collection System (EFDC) and will be accessible to the Commission or national correspondents of the other Member States on the request.

To build the LFAD, a detailed proposal of the Commission on data collection and data transportation formats is still needed.

## 7. TOTAL INPUT AND BUDGET

Chapter	Type of data	Number of men/months	Costs, EUR								Total	
			Staff	Travel	Durable equipment	Consumables	Computer costs	Sea allowance	Vessel costs	Subcontracting		
C	Fishing capacities, MP	2	900	0	0	0	0	0	0	0	0	900
D	Fishing effort, MP	5	2104	0	0	0	0	0	0	0	0	2104
E	Catches and landings, MP	3	1281	0	0	0	0	0	0	0	0	1281
E	Discards, MP	27.7	11353	4636	5002	2531	0	0	0	0	0	23521
E	Recreational fishery, MP	0	0	0	0	0	0	0	0	0	0	0
F	CPUE, MP	4	1601	0	0	0	0	0	0	0	0	1601
G	BITS spring survey, MP	6.05	2871	226	0	19137	0	137	15249	0	0	37620
G	BITS autumn survey, MP	6.05	2871	226	0	1525	0	137	15249	0	0	20008
G	Sprat acoustic survey, May, MP	6.14	2766	189	2501	0	0	915	45746	0	0	52116
G	Herring acoustic survey, 1 part, MP	4.68	2134	226	0	0	0	915	45746	0	0	49020
G	Herring acoustic survey, 2 part, MP	2.68	1211	226	0	0	0	69	7624	0	0	9129
G	Herring survey, 3 part, MP	3.05	1383	189	0	0	0	137	15249	0	0	16958
H	Age and length of landings, MP	10.28	4402	2760	5002	866	0	0	0	0	0	13029
H	Age and length of landings, EP	6.5	3217	488	7502	2638	0	0	0	0	0	13846
H	Age and length of discards, MP	0	0	0	0	0	0	0	0	0	0	0
I	Other biological parameters, MP	7.1	3254	0	0	0	0	0	0	0	0	3254
J	Economic data by group of vessel, MP	6	3004	381	2501	0	0	0	0	0	0	5886
K	Economic data for processing industry, MP	0	0	0	0	0	0	0	0	0	0	0
	Data base	4	1914	0	0	0	0	0	0	0	38121.38	40035
	Coordination	0	0	32098	0	0	0	0	0	0	0	32098
	<b>Grand total</b>	<b>104.23</b>	<b>46265</b>	<b>9546</b>	<b>22507</b>	<b>26697</b>	<b>0</b>	<b>2310</b>	<b>144861</b>	<b>38121</b>	<b>0</b>	<b>322405</b>

## 8. CONTACT PERSONS AND ADDRESSES

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1. ICES 1994. Manual for the Herring Hydro Acoustic Surveys, ICES CM 1994/H:3
2. ICES 2000. Manual for the Baltic International Trawl Surveys, ICES CM 2002/G:05
3. F. E. Alekseejev & E. I. Alekseejeva 1996. Assessment of gonades maturity stages and study of sex-cycles, fecundity, eggs production and maturation rate of marine commercial fishes. Methodical manual. Kaliningrad, ATLANTNIRO)

**10. Appendix Latvian form of questionnaire on economic data of individual vessel**

Expenses	Value (LVL)
<b>Fuel and oil costs</b>	
<b>Vessel costs</b>	
Materials	
Inventory	
Radio and phone	
Radio inspection	
Documentation	
Repair of fishing gears	
Food	
Rent of fishing rights	
Halt expenses	
Port services	
Port duties	
Administrative costs	
Veterinary and sanitary services	
Control of life-saving tools	
Vessel register, technical inspection, port supervisory	
Ship repair and maintenance	
Other	
<b>Other running costs</b>	
Transport	
Ice	
Other	
<b>Crew share, social costs included</b>	
<b>Invested capital</b>	
<b>Own capital/borrowed capital</b>	
<b>Depreciation</b>	
<b>Interest</b>	
<b>Employment on board</b>	
<b>GT</b>	
<b>Age</b>	
<b>kW</b>	