

Control of fisheries in the Baltic Sea

*Is control of trawling in the Baltic Sea effective and
does the management of fishery data support the
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Summary of audit results

What did we audit?

The National Audit Office audited the control of open sea fishing in the Baltic Sea and the development of the information system required for the management and control of fishery. The audit focused on the control of trawling, because this method is used in the Baltic Sea more extensively than coastal fishing and Estonia is obliged to meet the control requirements established for trawling in the European Union.

The audit is a part of the parallel audit in Baltic Sea countries that focused on environmental monitoring and fisheries management and control in the Baltic Sea.

Why is it important to taxpayers?

Fish resources in the Baltic Sea are low due to the environmental deterioration of the Baltic Sea and excessive overfishing. The large yields caught a few decades ago have decreased considerably and the resources of cod and salmon have reached a critical low and need to be restored. The Baltic Sea fishery is facing the task of restoring the shrinking fish resources and achieving their sustainable management. Particularly important for fishery control is to enforce the fishing requirements and prevent illegal fishing in order to achieve the goals that have been set. This is necessary for the protection of fish resources and the marine environment, and for supporting the continuation of our fishing traditions in coastal fishing regions.

What did we find and conclude as a result of the audit?

The National Audit Office is of the opinion that control is unable to discover illegal trawling efficiently because controls are not systematically planned, cooperation between different national control agencies is poor in some areas and several regions of the country are not sufficiently inspected. The disagreements between the Ministry of Agriculture and the Ministry of the Environment in the cross-checking and analysis of fishery data are also reducing the capability of control.

In order to increase the efficiency of control, it is necessary to use the existing means of information technology more extensively in detecting violations and inspecting landings by trawlers. The current two, separate fishery information systems must be combined into a single information system and the system of electronic fishing logs must be implemented.

The most important findings of the audit are as follows:

- Several existing options for analysing data are not used in the control of fishery. It is important to compare fishing, landing and sales data (so-called cross-checking of data), because this allows the detection of illegal fishing and handling. These data have not been used in the planning of control, because cross-checks have not been performed

for several years due to misunderstandings between state agencies. The Ministry of Agriculture, whose task is to keep records of fishing data in the fishery information system, has considered cross-checks to be the task of the Environmental Inspectorate; the latter, however, was unable to analyse the data contained in the fishery information system due to technical reasons. The functions offered by the vessel monitoring system (VMS) are also underused in control – the landing data given by fishing vessels in advance are not compared to the positioning data received through VMS. Both cross-checks and a better use of VMS would make control more efficient and reduce field work expenses.

- Control of landings of trawled fish is insufficient in some regions. Inspection of landings is particularly poor in Virumaa. There are also vessels and ports that are inspected considerably less than others. Weak control promotes illegal fishing.
- The state's control capacity in the open sea, especially in the exclusive economic zone of Estonia, is limited and the border guard vessels used for supervision are old. The capacity has improved somewhat with the new control vessel that was built in autumn 2008, which allows Estonia to participate in international control missions.
- There is no all-inclusive fishery information system that would cover fish resources, commercial and recreational fishing, and would serve as a source for information required for the management and control of the entire fisheries sector. The Ministry of the Environment and the Ministry of Agriculture have been unable to agree upon the development of a single and comprehensive information system that would perform tasks in the areas of responsibility of both ministries and have opted for the development of separate information systems instead. However, both the Ministry of the Environment and the agencies for control and research need to use both information systems in their work. The existence of a fragmented information system complicates both analysis and control. This is not user-friendly and leads to an increase in management and development costs.
- The Ministry of Agriculture is behind schedule with the development of electronic fishing logs, which means that their implementation by the deadline given by the European Union is uncertain. Although the fishing logs of large fishing vessels (over 24 m in length) must be replaced with electronic reporting of data from the vessels into the fishery information system by 1 January 2010, the financing of the project developed by the Ministry of Agriculture was still unclear in April 2009. The Ministry of Agriculture has also failed to use the funds from the Fisheries Fund of the European Union for the development of the electronic fishing log and the use of these funds has been rather modest overall. Implementation of the electronic fishing log for fishing vessels is important, because it enables fishing data to be entered into the fishery information system faster than is currently done, thus improving planning of control. Entering the data manually will come to an end.

Response of the Ministers of the Environment and Agriculture:

The Minister of the Environment and the Minister of Agriculture agreed with the majority of the proposals made by the National Audit Office. The ministers admitted that the new fishery information system implemented by the Ministry of Agriculture in 2009 will improve the options of data analysis and supervision. The ministers also agreed that it is necessary to integrate the separately developed fishery information systems. The ministers also believe that it is necessary to analyse the efficiency of the current organisation of fishery administration and control, because management of the area is currently divided between different ministries and agencies. The implementation of several recommendations made by the National Audit Office has already started.

The Minister of Agriculture is of the opinion that linking the register of preliminary notices of fishing vessels with the fishery information system is unnecessary, because the electronic fishing log system for fishing vessels should be launched in 2010 and preliminary notices are a part of this new system. The minister also believes that linking the VMS positioning database with the separate fishery information system would not be practical, because positioning data is also a part of the planned electronic fishing log. The Minister of Agriculture has a different opinion about this and he has assigned the Environmental Inspectorate the task of working with the Ministry of Agriculture and developing an IT solution for linking the data from the vessel monitoring system and the fishery information system (FIS) in order to support cross-checking required in everyday control. The National Audit Office notes that the technical solution and implementation of the electronic fishing log system are still unclear. Also according to the Ministry of Agriculture, the procurement is still under preparation and the ministry is trying to find the required funds.

The Minister of the Environment notes that the Environmental Inspectorate has been paying more attention to controlling the landing of fish since 2008. A new inspection registration system will be launched in the Environmental Inspectorate from 1 October 2009, which will make processing and analysing the results of inspections easier. Operation of the duty telephone of the Ministry of the Environment passed to the Rescue Centre on 1 May 2009 as they have better technical facilities and more experience that will allow for improvement of the quality of data.

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Overview of the field

Brackish water – water with a low level of salinity (0.5–18‰), usually a mixture of sea and river water.

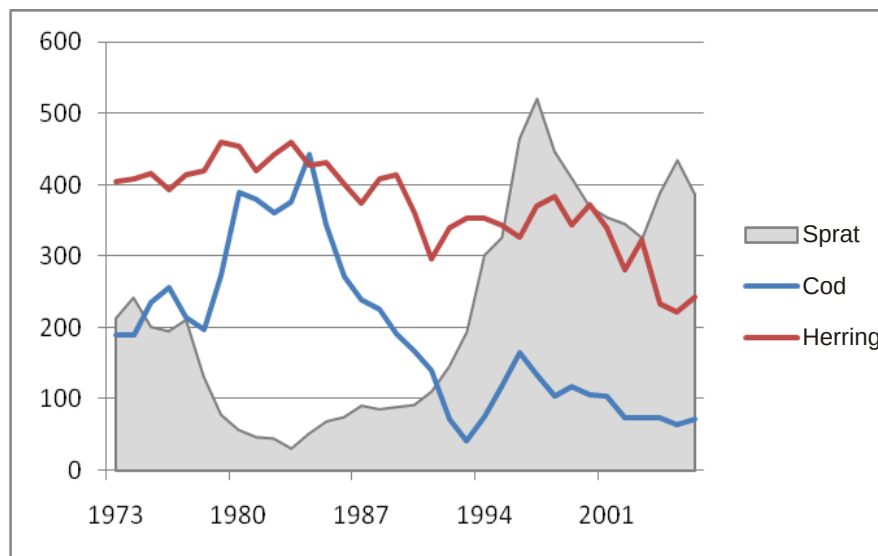
Eutrophication – enriching of a body of water with nutrients (mainly phosphorus and nitrogen compounds), which causes deterioration of the water quality and a lack of oxygen.

Commercial fishing in the Baltic Sea is divided into deep-sea fishing or trawling and coastal fishing

1. The Baltic Sea as the largest body of water containing **brackish water** is ecologically unique. The Baltic Sea is connected to the oceans of the world only through the narrow Danish straits which limit the inflow of water from the North Sea, which has considerably bigger oxygen content and a higher level of salinity, and thus the ecologically important water exchange is hindered. The water exchange is irregular and estimated to take 25-30 years, which makes the sea very sensitive to pollution. Another important factor is the difference in water salinity in the different areas. The areas of a higher level of salinity have a richer fish fauna and are also the best fishing grounds (for example, Gdansk, Gotland and Bornholm abysses). Due to the special ecological conditions, less than a hundred fish species inhabit the Baltic Sea.
2. Intense human activity in the Baltic Sea region, both on land and sea, is a great danger to the environment of the Baltic Sea. Most harmful to the Baltic Sea are overfishing, **eutrophication**, contamination with pollutants and the invasion of alien species.
3. The majority, ca. 90%, of the catch volume in the Baltic Sea comes from **deep-sea fishing or trawling**. The species mostly caught are the Atlantic cod, the Baltic herring and the European sprat. The fishing gear usually used are trawls dragged by larger (over 15 m long) vessels. The Council of the European Union establishes catch quota for salmon, in addition to cod, herring and sprat, on the basis of the assessment of fish resources and economic suggestions made by the International Council for the Exploration of Sea (ICES). Due to the relatively shallow coastal waters, the proportion of **coastal fishing** – in up to 20 m deep coastal waters – is rather great in the fishing activities in the Baltic Sea. In coastal fishing, smaller, mostly under 10 m long vessels are used, this is about 70% of the fishing fleet of the Baltic Sea. Also many different types of fixed gear are used (traps, longlines, bottom-set gillnets, etc.). Coastal fishing provides the biggest number of fish of different species.
4. An increase in catch volumes has had the biggest impact on the resources of the commercial species of the Baltic Sea (cod, herring, sprat, and salmon); over the last half-century, their catch volumes have increased nearly ten times. Until the 1930s, catch volumes remained at about 120,000 tons, then increased to about 500,000 tons in the 1950s and reached nearly a million tons per year at the end of the 1970s. Overfishing caused a low level of the resources of commercial species and, with some species (e.g. cod, salmon), it was even below their natural regenerative capacity.
5. Since the middle of the 1980s, the catching of the main commercial species (except for sprat) has decreased considerably but the resources are still low. Evaluations of the situation of fish resources have become more critical year after year and it has been recommended for the countries to reduce their fishing effort. The most critical is the state of cod resources both due to the overfishing and the periodically changing salinity of the Baltic Sea. In June 2007 the Fisheries Council of the EU adopted a long-term management plan for the cod stocks in the Baltic Sea, which, in the first years, was also the plan for restoration of the eastern resources of the Baltic Sea cod. Also the salmon resources in the Baltic Sea have become very low. The biggest part of salmon caught in the Baltic Sea come from fish farms. In the Gulf of Bothnia, 27% of young salmon descending to

the sea from rivers are of natural origin but, in the Gulf of Finland, the percentage is lower than 6.

Figure 1. Catch volumes of cod, herring and sprat (in tons)



Source: National Audit Office on the basis of data from ICES

Illegal, unreported and unregulated fishing (IUU) include:

- Catch exceeding the allowed catch quota;
- Catching from a vessel not having the catch quota or not authorised to fish;
- Catching of undersized fish;
- Catching with prohibited fishing gear;
- Catching in an area where fishing is prohibited or in an area where the vessel is not authorised to fish.

6. The biggest problems in the preservation of fish resources and ensuring sustainable management of the resources are considered prohibited fishing, officially called illegal, unreported and unregulated fishing (*hereinafter referred to as illegal fishing*). Illegal fishing is a global problem concerning most of the fishing grounds of the European Union.

7. Due to the lack of evidence and the complexity of the problem, it is difficult to evaluate the extent of illegal fishing and the overall damage caused, and relevant efforts have been made only in the last few years. Illegal fishing is accompanied by serious damage to fish resources, economy and employment. Illegal fishing is estimated to make up at least 15-20% of global fishing and the extent of the damage exceeds USD 30 billion a year.

8. Initial analyses have revealed¹ that the loss resulting from prohibited fishing in all fishing grounds of member states amounts to EUR 6 billion a year in total and the actual total cost is probably substantially greater. According to an evaluation of the European Court of Auditors from 2007, in case of some resources, illegal fishing may reach an amount equal to the official catch volume.

9. The illegal catch volume of cod in the Baltic Sea has been estimated to be on average 35-40% of the total catch and that of herring and sprat 35% of the total catch.¹ The resulting estimated loss up to 2020 will be ca. EUR 47 million a year for the EU Baltic Sea States, including the loss of nearly 3,800 jobs due to illegal fishing.

¹ Costs of Illegal, Unreported and Unregulated Fishing in EU Fisheries. 2008. Economics for the Environment Consultancy Ltd, London.

Management of fisheries in the Baltic Sea

10. Following the enlargement of the European Union in 2004, the Baltic Sea has become, almost totally, an inner sea of the European Union, as the only country on the Baltic Sea not belonging to the EU is Russia. Whereas prior to the enlargement of the EU in 2004 it was the International Baltic Sea Fishery Commission (IBFSC) who decided on the use of the common fish resources of the Baltic Sea, since the shutdown of the commission in December 2005 the use of the resources has been decided in bilateral negotiations between the EU and Russia. So far, the EU and Russia have not entered into a cooperation agreement on the protection and sustainable use of fish resources of the Baltic Sea.

11. The European Union manages fisheries through the common fisheries policy, the aim of which is to ensure sustainable development of fisheries, also taking into account the balance of environmental, economic and social aspects. The common fisheries policy includes, *inter alia*, the following:

- Organisation of the management and protection of fish resources to ensure sustainable use of the resources, by establishing, for example, quota and catch limitations and introducing economical fishing methods;
- Control of the activities of the fisheries sector, the main means for which are monitoring of the journey of fish from their catching and landing to their processing and retail sale.

Catch quota for the regulation of catching of herring, sprat, cod and salmon are established by the European Union

12. The EU manages only sea fisheries; fisheries of internal waters are within the competence of member states. Total allowable catches (TAC) in the Baltic Sea are established by the Council of the European Union for four fish species – herring, sprat, cod and salmon – on the basis of the recommendations of researchers (ICES) and the European Commission. As a political decision, the Council has often established larger catch quota than suggested by the researchers according to the state of the resource. Also, the European Commission has seen this as a serious problem in the sustainable management and restoration of fish resources.

13. For the purpose of financing the common fisheries policy the European Fisheries Fund was founded, the size of which for the programming period 2007-2013 is ca. EUR 3.8 billion. The measures of the Fisheries Fund are aimed at balancing fishing capacity and fishing opportunities (resources) (the problem today being fleet exceeding the fishing opportunities), strengthening fisheries undertakings and improving their competitiveness, implementing more eco-effective fishing and processing methods, training the employees of the fisheries sector and supporting sustainable development of the fishing regions.

14. The cornerstone of the EU Fisheries Policy is limitation of catch volumes and control over compliance with the established requirements. Both the European Court of Auditors (report no. 7/2007) and the European Commission have found that the current control system is inefficient, expensive and complex for the prevention of illegal fishing, which has a substantial negative impact on fish resources, the fishing

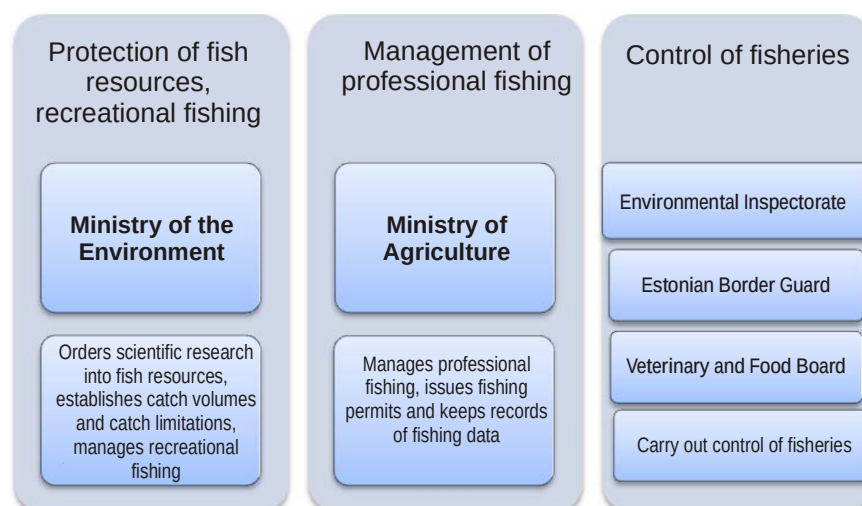
industry and regions dependent on fishing. Therefore, the European Commission plans to reform the control system in 2010.² The aim of the reform is to simplify the legal framework of control and harmonise the procedure for control. There is an intention, *inter alia*, that there should be an authority in each member state to coordinate the control activities of all national control authorities and be responsible for collecting fishing information, control over it and communication of information to the European Commission. Implementation of the obligations of the member states will be connected with the financial support received from the European Fisheries Fund.

Fisheries in Estonia

15. Since 2006 the management of fisheries in Estonia has been divided between the Ministry of Agriculture and the Ministry of the Environment. The area of responsibility of the Ministry of Agriculture covers the management of commercial fishing, including fishing permits and keeping records of fishing data, fish trade and -processing, state support and that of the European Fisheries Fund and other things related to fishery as trade. The area of responsibility of the Ministry of the Environment includes evaluation of the state of the fish resources and organisation of scientific research for the purpose, establishment of catch volumes, management of recreational fishing, establishment of catch limitations, protection of fish resources and re-establishment of resources.

16. Within the governance of the Ministry of the Environment the Environmental Inspectorate plays the main role in the control of fisheries. The Environmental Inspectorate controls the use of the natural environment and resources and applies, in the case of violations, on the basis and within the scope established by acts of law, means of enforcement by the state. The Environmental Inspectorate is the body conducting extra-judicial proceedings in the case of violations of law concerning the environment and performs initial investigative activities in criminal cases.

² Communication from the European Commission to the European Parliament and the Council on the proposal for a Council Regulation establishing a Community control system for ensuring compliance with the rules of the common fisheries policy.

Figure 2. The role of state authorities in the management of fisheries and conducting control

Source: National Audit Office

17. The effectiveness of environmental control depends largely on cooperation between different agencies. In addition to the Environmental Inspectorate as the central environmental control agency, control over the fisheries area is carried out by several other authorities. The Border Guard in cooperation with the Environmental Inspectorate performs control of fishing in the open sea using the technical means at its disposal: border guard vessels and the marine monitoring system. The Veterinary and Food Board controls the safety of fish and fish products to consumers and the compliance of fish as food with the requirements in all aspects. The Tax and Customs Board performs control of the economic activities of fisheries undertakings, in the course of which they identify, in cooperation with the Environmental Inspectorate, the processing of illegally caught fish (for example). The police conduct proceedings in criminal violations in the fisheries area, in which case initial procedural acts are performed by the Environmental Inspectorate.

The European Union supports the development of the fisheries sector

18. The Estonian fisheries sector is divided into three major areas: fishing, processing and marketing of fish and fish farming. To date the fisheries sector has largely relied on structures and technology remaining from Soviet times. In connection with Estonia's joining the EU, the technology was renewed in 2001-2004, mainly to meet EU hygiene requirements, but actually only a fraction of the total assets have been replaced.

19. Trawling in the Baltic Sea makes up ca. $\frac{3}{4}$ of the total fishing in Estonia. The register of fishing vessels includes, regarding the Baltic Sea, 159 fishing vessels over 12 m long, of which ca. 70 are engaged in fishing. The main fish species caught are herring, sprat and cod. The profit gained from the catches was EEK 129 million in 2005.

20. It is difficult to efficiently manage the depreciated fishing fleet with excessive fishing capacity and ensure that the handling of fish complies with requirements. For the modernisation of the fishing fleet and fish handling and production it is possible to receive money from the EU Fisheries Fund. In 2004-2006 the fisheries sector was supported with ca. EEK 240 million from the Financial Instrument for Fisheries Guidance. In the programming period 2007-2013, the support from the European Fisheries Fund meant for Estonia is EEK 1.32 billion (plus co-financing amounting to EEK 1.76 billion), of which ca. EEK 162 million (12.2% of

the budget volume) were covered by projects approved by March 2009. Disbursements have been made in the amount of ca. EEK 5.2 million (0.39% of the budget volume). The aim of the support policy is to make the Estonian fisheries sector competitive and sustainable and maintain the majority of jobs in the sector.

21. Estonia uses maximally its fishing opportunities for the fish species that are internationally regulated, except for salmon. The fishing capacity of vessels registered in the national register of fishing vessels exceeds the quota allocated to Estonia, considering the fishing opportunities. However, according to the evaluation of researchers from the Estonian Marine Institute of the University of Tartu, the fishing capacity of vessels authorised to fish and actively engaged in fishing is in balance with fishing opportunities.

22. The audit of the National Audit Office is a part of the parallel audit organised by Baltic Sea countries and concerning the environmental monitoring of the Baltic Sea and management and control of fisheries, of which a separate report has been drawn up. The topics of the audit chosen by the National Audit Office were those considered by the control authorities of the Baltic Sea countries as needing the most attention. The National Audit Office decided to address more thoroughly the management and control of fisheries in Estonia.

Control of trawling in the Baltic Sea

23. The task of control of fisheries is to prevent illegal fishing, ensure compliance with fishing requirements and protection of fish resources. The Baltic Sea fisheries are covered by the EU common fisheries policy regarding the species for which quotas have been established, and therefore Estonia must, in addition to its own acts of law, follow the directly applicable regulations of the Council of the European Union and of the European Commission.

24. The EU requires member states to control activities in their territories and in waters under their jurisdiction and sovereignty: to inspect fishing vessels, control all activities, including landing, sale, transport and storing of fish and registration of landings and sales. Such control is carried out by all member states themselves, using their own inspection systems but avoiding excessive interference in usual fishing activities and taking care of equal treatment of all fisheries undertakings and fishermen.³

25. In a situation where several fish resources are in a critical state and their restoration requires the establishment of strict catch limitations and adherence to the limitations, the present control of fisheries has received critical evaluations. The European Commission and the European Court of Auditors note that the catch registration, control and monitoring systems applied in the member states are extremely inadequate. Important fishing data are not complete and reliable and differ in member states making the implementation of a common control policy and application

³ Council Regulation (EEC) no. 2847/93 establishing a control system applicable to the common fisheries policy.

of uniform, efficient punishments impossible. As a result, it is difficult to efficiently prevent illegal fishing and achieve favourable status and sustainable management of fish resources.

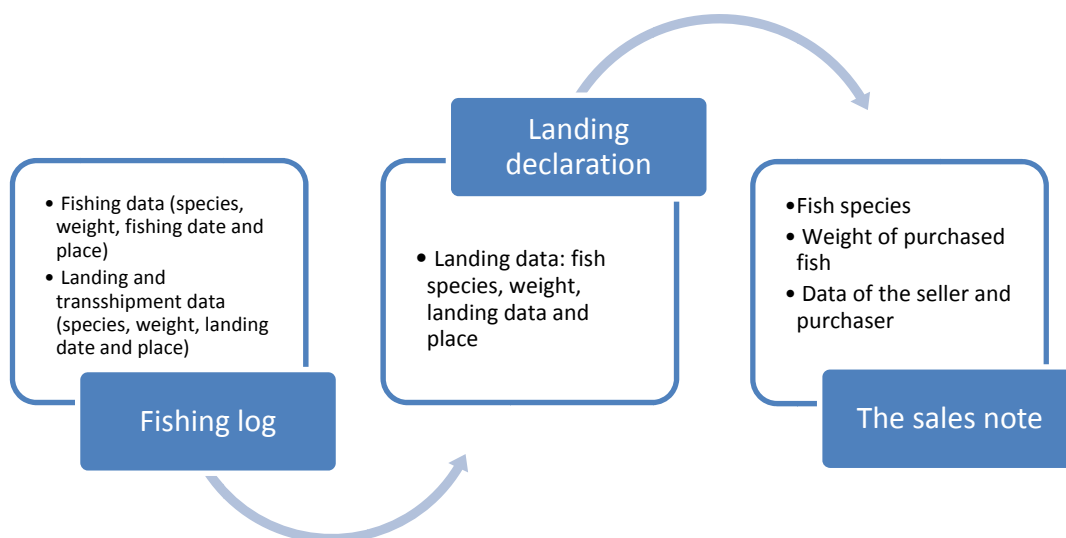
The control is not based on the results of cross-checks of fishing data

26. To adhere to catch volumes, the market access for illegally caught or uncertified fish must be prevented. According to the Fishing Act of the Republic of Estonia, the origin of fish caught for commercial purposes must be certified. It is prohibited to sell, purchase or handle fresh fish whose origin is not certified. The sales note, landing declaration, the fishing log of the fishing vessel or the declaration on the discharge of fish is deemed to be the document certifying the origin of the fish.

Falsification of information submitted in these documents, failure to submit information within the prescribed term or submission of false information is a violation which, pursuant to the Fishing Act (§ 20), are deemed to be activities significantly interfering with the conservation and management of fishery resources.

27. A method for establishing the accuracy of data certifying the origin of fish can be cross-checks in the fishery information system: the same indicators are checked in different documents; for example, the weight of landed fish must be the same in the fishing log of a fishing vessel and the landing declaration.

Figure 3. Conformity of data in cross-checking of fishing data



Source: National Audit Office

28. Until 1 January 2008, the estimated weight of fish indicated in the fishing log could differ from the measured weight of landed fish by up to 20%. Since 2008 the allowed difference between the quantities shown in

Cross-checks have not been performed due to disagreements between the Ministry of Agriculture and the Environmental Inspectorate

the fishing log and the fish landed has been up to 10%, and up to 8% with cod.⁴

29. The National Audit Office established whether fishing data entered in the fishery information system was cross-checked in 2005-2007 and whether the results were used in the planning and implementation of control. It appeared that, until the beginning of 2006, cross-checks of fishing data were performed by the Ministry of the Environment, who communicated the results to the Environmental Inspectorate for detection of possible violations. In January 2006 the Ministry of the Environment passed the management of commercial fishing (incl. management of the records of fishing data) over to the Ministry of Agriculture.⁵ In the same year, performing of complete cross-checks of fishing and landing data was interrupted as the Environmental Inspectorate and the Ministry of Agriculture could not agree on whose task it was.

30. The National Audit Office established that, in 2006-2007, complete cross-checks of fishing records of the fishing vessels, landing declarations and sales notes were conducted by neither the Ministry of Agriculture as the new administrator of data on commercial fishing nor the Environmental Inspectorate as the supervising body. The Ministry of Agriculture is of the opinion that cross-checks form part of control and are thus the task of the Environmental Inspectorate. The position of the Environmental Inspectorate is that cross-checks of data should be performed by the Ministry of Agriculture who administers and processes fishing data.

31. As explained by the Environmental Inspectorate, they have limited technical means for performing cross-checks as enquiries about longer periods can be made only as special enquiries for which the Inspectorate has no authorisation. The relevant administrator's rights are held only by a few specialists in the Ministries of the Environment and Agriculture. Although the fishery information system has a module of "reports" meant for common users, according to the Environmental Inspectorate it cannot be used for extensive cross-checks needed in the control work. Inspectors from the Environmental Inspectorate have performed cross-checks in individual cases when there have been doubts or claims, and if the fishery information system has enabled this. The Ministry of Agriculture claims that the Environmental Inspectorate has not requested cross-check enquiries from them.

Most trawlers have submitted data which refer to potential violations

32. In the course of the audit the National Audit Office asked the Ministry of Agriculture to present the cross-checks of fishing records with landing declarations and the cross-checks of landing declarations with sales notes for 2006 and 2007 and analysed these. The analysis revealed that most of the trawlers engaged in active fishing submitted, at least once a year, data in which fishing and landing data differed more

⁴ Article 5 of the Council Regulation no. 1098/2007; Government of the Republic of Estonia Regulation no. 104 Procedure for submission of data concerning fishing.

⁵ Decision no. 15 of the Government of the Republic of Estonia of 15.04.2004; the Act amending the Fishing Act. RT I, 28.12.2004, no. 89, p 609.

than 20%, i.e. more than allowed. Thus the procedure for submission of data has been violated.

33. The fishing and landing data from 2006 differ more than allowed in 645 of the 5,000 landings, which is 13% of the total landings. In total 66 vessels were engaged in fishing and submitted fishing data, of which 15 vessels submitted incorrect data, exceeding the allowed difference more often than in every fifth landing (over 20% of landings). In 2007 excessively differing fishing and landing data were submitted in 480 out of ca. 5,000 landings and 9 vessels submitted incorrect data about more than 20% of landings.

Table 1. Number of trawlers which submitted excessively differing fishing and landing data

Year	Total number of vessels engaged in fishing	Vessels that submitted excessively differing data at least once	Vessels that submitted excessively differing data about more than 20% of landings
2006	66	60	15 (23% of vessels)
2007	54	49	9 (17% of vessels)

Source: National Audit Office, on the basis of cross-checking data and data from the register of preliminary notices of landing

34. The excessive differences (over 20%) in fishing and landing data may consist in different fish quantities, from tens of kilos to tens of tons. For example, in 2006 excessively differing data were submitted at about 645 landings, in ca. 810 cases in total when considering the different fish species caught (in each landing the species caught must be reported separately, which is why mistakes can be made several times in submission of the data – e.g. incorrectly determining the proportions of herring and sprat in the catch). The fish quantities which differed in the fishing log and landing declaration in these 810 cases are presented in Table 2.

Table 2. Distribution by weight of excessively differing fish quantities in the 2006 comparison of fishing and landing data (differences below 50 kg are not included)

50-500 kg	501-5,000 kg	5,001-10,000 kg	over 10,000 kg
406 (50%)	349 (43%)	38 (5%)	17 (2%)

Source: National Audit Office on the basis of cross-checking data of the fishery information system

35. The cross-checking data reveal vessels which are conspicuous with the largest differences both in terms of submission frequency of incorrect data and the most differing data. For example:

- The differences in fishing and landing data of 2006 per landing are up to 60 tons. According to the data of the fishery information system, there was a trawler which caught 80 tons of sprat but landed only 17.6 tons. Another vessel caught 34 tons of herring and 2 tons of sprat but landed 2 tons of herring and 40 tons of sprat at the port.
- One vessel was particularly remarkable with the greatest frequency of submission of excessively differing data, submitting incorrect data about half of its landings, i.e. 67 of 128 landings. The vessel landed, for example, sprat 104 times in 2006.

According to the data of the fishing log, the vessel caught in total 1,020 tons of sprat that year but landed 886 tons, which is 134 tons less. And the vessel caught 711 tons of herring but landed 766 tons, which is 55 tons more. In 2006 the Environmental Inspectorate inspected the vessel 21 times (16% of landings) but detected no violations.

36. As the Environmental Inspectorate explained, mistakes can occur in applying the sample-taking method. Inspecting trawlers, the inspectors calculate the ratio of caught sprat and herring by the random sampling method as required by the Fishing Rules.⁶ If, in inspecting a vessel, the inspector estimates the total quantity of sprat and herring on the basis of visual assessment without determining their ratio (as required by the sampling method), the result is a difference in the species ratio of fish reflected in the cross-checking data.

37. Also, comparison of landing declaration and first sales note reveal a number of differences. Fish quantities landed and sold or passed over must be weighed and in conformity. The results of the cross-check performed about the data of 2006 of the Ministry of Agriculture revealed 587 cases where landing data differed from sales note data by more than 100 kg, in 344 of which the data differed by more than 1,000 kg. An example of the largest difference: 40.7 tons of fish were landed but 124.4 tons were passed over. In 2007 the data differed by more than 100 kg in 410 cases and by over 1,000 kg in 125 cases.

The Inspectorate does not control vessels that have submitted incorrect data more often than they control other vessels

38. A comparison of the frequency of submission of incorrect data by vessels and that of the control activities of the Environmental Inspectorate does not show any relation. More frequent submission of false data by a vessel has not led to more frequent control of the vessel the next year. Thus it can be said that the control of landings is not based on risk assessment.

39. The Environmental Inspectorate has seldom detected submission of incorrect data compared to the results of the cross-check. According to the data of the Environmental Inspectorate, violation of the procedure for submission of data occurred in 44 cases in the period from 2005-2008. In total, the Environmental Inspectorate conducted proceedings in 18 cases of violation of the procedure for trawling in 2006 and in 9 cases in 2007. At the same time, in 2006 the Environmental Inspectorate performed in total 662 control activities over trawling in 2006 and 645 in 2007.

40. The **National Audit Office** is of the opinion that data in the fishery information system refer to the possibility that a considerably large number of fishing vessels have not submitted correct fishing data. Control of fisheries has not detected those violations. The main reason for the problems has been poor cooperation between the Ministry of Agriculture and the Environmental Inspectorate, which is why cross-checks of fishing data have not been performed and their results applied for assessment of the risks of trawling and more efficient planning of control. Using the results of cross-checks would enable to reduce control costs as the

⁶ Regulation no. 144 of the Republic of Estonia of 9.5.2003.

inspectors could focus on the objects which have a higher risk of violation. The fact that only a few violations of the procedure for data submission have been detected may refer to superficial control activities.

41. Recommendations of the National Audit Office to the Minister of the Environment:

Base the planning of control on risk assessments:

- Prepare risk assessments on the basis of, *inter alia*, the results of cross-checking data in the fishery information system;
- Ensure that persons who have committed fishing violations more frequently are inspected relatively more frequently.

Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations of the National Audit Office and will assign the Environmental Inspectorate the task of taking the recommendations into account in the preparation of its annual work plan. The flexible reporting module created in the new fishery information system enables the performance of regular cross-checks of fishing and landing data, which helps the Environmental Inspectorate to plan its work better.

42. Recommendations of the National Audit Office to the Minister of Agriculture:

- Ensure functioning of the fishery information system in such a way that it would enable control authorities to conduct flexible and quick cross-checking analyses. Preconditions for this have been created with the new fishery information system which was implemented at the beginning of 2009 and which includes a separate analysis module.
- Conduct cross-checking analyses of data of the fishery information system, since the Ministry of Agriculture as the administrator of the information system has the necessary competence for use of the information system and the possibility to check data, in the case of considerable discrepancies, on the basis of documents submitted. Communicate the results of cross-checks to the Environmental Inspectorate for planning and performance of control activities.
- Following successful implementation of the fishery information system and training of users, pass the performance of cross-checks over to the Environmental Inspectorate.

Response of the Minister of Agriculture: The fishery information system of the Ministry of Agriculture has been implemented, user training has been carried out, incl. for the Environmental Inspectorate on 4 February in Tartu, on 5 March in Tallinn and on 11 March in Pärnu.

At present⁷ the necessary technical means for performing cross-checks have been provided.

Performance of cross-checks has been passed over to the Environmental Inspectorate both regarding the fisheries information system and the reporting and analysis software processing fishing data, which, in our estimation, enables the making of control enquiries and finding, for analysis, different deviations from the norm in fishing activities particularly well. In cooperation with the Environmental Inspectorate two discussions/training courses have been held: on 16 February in Tallinn and on 9 April a training course on reporting software in the Ministry of Agriculture.

Control of landings of trawled fish at ports is insufficient in some regions

43. For protecting fish resources, it is important to avoid overfishing as it endangers sustainable use and restoration of resources. Control of fish landed at ports is one of the few opportunities to control the actual catch volume of the vessel and the one reported in the fishing log. To inform the Environmental Inspectorate of post-fishing landings, the captains of vessels must send the Inspectorate, at least two hours prior to arriving at a port, a preliminary notice indicating the place of landing, the time of arrival at the port and information on the fish species to be landed.

44. The legal acts of the EU do not lay down the frequency of landing inspections at ports (except for cod). The Environmental Inspectorate has, in several cases, set itself a relevant objective:

- The development plan of the Environmental Inspectorate 2002-2004⁸ set the objective to improve environmental control and inspect 40% of fish landed at Estonian ports in 2004.
- In 2006 the objective of the Environmental Inspectorate was to inspect 15% of landings by trawlers and 10% of the quantity of fish landed.
- The development plan of the Environmental Inspectorate from 2008-2011 sets the objective to inspect 19% of fish landed in Estonia by 2011. The development plan says that control of trawling in the Baltic Sea is not sufficient and the frequency of control, due to the lack of inspectors, does not ensure an overview of the activities of fishing vessels in Estonia regarding the catching of cod, herring and sprat.

45. To obtain an overview of inspection of landings at ports in 2005-2007, the National Audit Office compared the database of preliminary notices of landing of trawlers and the database of inspection activities registered by the Environmental Inspectorate (the register of object control protocols). The analysis revealed that the Environmental

⁷ 29.4.2009

⁸ Keskkonnainspektsiooni strateegilise arengu kava 2002–2004 (Strategic development plan of the Environmental Inspectorate), Tallinn 2001

Inspectorate inspected on average 7% of landings in 2005 and on average nearly 13% of landings in 2006 and 2007 (see Table 3). The objectives set for control of landings were not achieved but, compared to 2005, the control had improved considerably. Reliable assessment of the proportions of inspected fish species in the total quantity of fish landed was not possible, as the register of object control protocols does not reflect all samplings and the quantity of fish assessed.

Table 3. Landings of fishing vessels and the proportion of inspected landings from 2005–2007

County / region of the Environmental Inspectorate	2005		2006		2007	
	Landings	Control %	Landings	Control %	Landings	Control %
HARJUMAA, EI North region	2,421	6.8	1,715	8.9	1,831	6.0
LÄÄNEMAA, EI West region	1,465	5.9	1,165	16.3	1,399	20.3
PÄRNUMAA, EI West region	146	10.3	65	10.8	118	28.8
SAAREMAA, EI West region	1,358	11.7	1,181	18.0	827	20.1
HIIUMAA, EI West region	358	2.8	484	15.3	489	10.0
IDA-VIRUMAA, EI East region	482	1.2	329	2.4	385	0.3
LÄÄNE-VIRUMAA, EI East region	165	1.8	79	5.1	30	3.3
TOTAL	6,395	6.9	5018	12.9	5,079	12.7

Source: National Audit Office

46. However, the level of control differs in different regions to a great extent (see Table 3). The best level of control has been achieved in Läänemaa, Pärnumaa and Saaremaa, where a considerably larger number of landings have been inspected compared to 2005, exceeding 20% in 2007. The level of control is weak in Hiiumaa and Harjumaa, where 6-10% of landings were inspected in 2007. In Ida- and Lääne-Virumaa a very small number of landings were inspected according to the data of the register of object control protocols. Although there are no ports with numerous landings in the region, it is not justified that only 0.3-5% of landings there had been inspected. For example, in 2007 only one of the 385 landings in the region was inspected according to the register of object control protocols.

There are ports and vessels which have never been inspected

47. Observation of inspection of landings by ports shows that, according to the data of the register of object control protocols, there are ports where landings of trawlers were never inspected from 2005-2007. Such ports are, for instance, Narva-Jõesuu (49 landings in 2007), Toila (313 landings in 2007) and several others where there are, however, fewer preliminary notices of landing. Most frequently inspected (over 15%) are the ports with the biggest number of landings in Läänemaa (Dirhami, Haapsalu), Saaremaa (Roomassaare, Mõntu) and Pärnu.

48. In 2005 there were 20 trawlers which landed over 100 times a year but were not once inspected by the inspectors in that year, while in 2007 there were 5 vessels with 50-100 landings not once inspected (the

National Audit Office left out of the analysis vessels under 12 m long and vessels which landed less than 10 times a year). Also the level of inspection of vessels is uneven. In 2007, for example, 31% of landings of the trawler Kastna were inspected (115 landings, of which 36 were inspected and no violations detected) and 37% of landings of the vessel Kihelkonna (38 landings, of which 14 were inspected and no violations detected). But the vessels Aidu (85 preliminary notices in 2007) and Valaste (89 preliminary notices in 2007) have never been checked by inspectors.

49. As the Environmental Inspectorate explained, the environmental inspectors of Lääne-Virumaa were, in the period mentioned, engaged in the control of compliance with the requirements of the Hunting Act, the Nature Conservation Act and the Waste Act. Control of several areas took up a substantial part of resources, which is the reason why the inspection of landings of trawlers suffered in Lääne-Virumaa until the beginning of 2008. In 2008 more resources were allocated to control of landings and thus the control of trawlers improved to a great extent. In this period, most attention in Ida-Virumaa was paid to fishing in Lake Peipus, where a decrease in the number of violations has been achieved. The Environmental Inspectorate notes that control of fisheries in Ida-Virumaa has been affected by fluctuation of personnel as well. The largest number of landings has been at the ports of Harjumaa but the total number of inspections there is nearly the same as in other counties. A certain amount of the working hours of the inspectors was spent on recovering major pollution in north-western Estonia. And in the autumn, considerably more resources are required for control on salmon rivers, the number of which is greatest in Harjumaa.

50. **The National Audit Office is of the opinion** that the Environmental Inspectorate has not been able to fulfil its assumed obligations in terms of control of landings of trawlers and the level of control is different in different regions. The control of fishing has been the poorest in Virumaa. Control also differs notably by vessels. The National Audit Office finds that if the need for control does not arise from previously assessed risks (e.g. earlier violations) it is necessary to unify the basis for control. Poor control promotes an increase in the number of violations in some regions and illegal fishing.

51. Recommendations of the National Audit Office to the Minister of the Environment:

- Improve control of landings primarily in Ida-Virumaa and Lääne-Virumaa as well as in Harjumaa and Hiiumaa and make the level of control of landings in different regions and with different vessels uniform, also taking risk assessments into account.
- Involve fishery inspectors of other counties in the inspections. This would help exchange of experience in risk assessment and control and reduce the danger of unfair treatment of fishing vessels.
- Ensure control of documenting the inspection activities and high-level reliability of the register of object control protocols, marking the fish quantities (primarily of cod) inspected by sampling on it.

Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations and will assign the Environmental Inspectorate the task of considering the recommendations in the preparation of its annual work plan and improving the documenting of inspection activities by continuing, *inter alia*, the training of inspectors for the purpose.

Since 2008 the Environmental Inspectorate has intensified control of landings of fresh fish at ports in the Northern region and paid more attention to precision in determining the species composition of fish catches. This year, seven misdemeanour procedures have been initiated against captains of trawlers because of incorrect determination of species composition of fish. In the Northern region the aim has been set of more intense control at small ports situated further from Tallinn. On 1 October, the Environmental Inspectorate will launch the new inspection registration system OKAS, facilitating the completion and registering of control protocols. OKAS will make it possible to process and analyse the majority of the results of control conducted by inspectors. In OKAS a larger number of departmental forms of control of fisheries will be applied than previously, helping to unify the conducting and level of control in the entire Environmental Inspectorate.

The register of preliminary notices of landing does not provide a full overview of catches landed

52. In the management of control it is important to know when vessels arrive at a port. The preliminary notice of landing that must be sent to the Inspectorate two hours prior to arrival at a port must include, *inter alia*, the fish quantities on board the vessel by species composition with at least 100 kg precision. The fish quantity indicated in the notice must not differ from the actual fish amount on board by over 20%. The notice must be sent to the Environmental Inspectorate by fax or e-mail or, if this is not possible, a call can be made on the 24-hour number of the Inspectorate.⁹

53. The Environmental Inspectorate enters the received preliminary notices in the register of preliminary notices. The information registered must enable the Inspectorate to decide on the priority of inspecting each landing and to check the quantity of each fish species caught compared to that indicated in the preliminary notice.

54. These control aspects are particularly important in the case of cod, for which quotas are established by the EU, as due to the critical state of the resources of the species, stricter requirements are imposed on the control of catching of cod (at least 50% of cod landings must be inspected and the fish quantity named in the fishing log may only differ from the quantity on board by 8%).¹⁰ These increased requirements must be applied despite the fact that the amount of cod landed at Estonian ports is very small (in the period from 2005-2007 less than 5 landings a year) and most of the cod caught by Estonian fishing vessels are landed at ports in

⁹ Regulation no. 76 of the Minister of the Environment of 7.5.2004, (RTL 2004, 55, 924).

¹⁰ Council Regulation (EC) no. 1098/2007.

The register of preliminary notices of landings does not reflect part of the fish species caught

other Baltic Sea countries, mostly in Denmark and Sweden (e.g. 169 landings in 2006).

55. The National Audit Office analysed the register of preliminary notices of the Environmental Inspectorate and found that only the quantities of herring and sprat caught have been differentiated by species in the register. For other fish species, including cod, there is only a box named “Other fish quantities” where only the quantity of fish caught must be entered, not the species. It is possible to specify the other species on board in the adjacent notice box but, with many entries, this has not been done.

56. About the period from 2005-2007, observed by the National Audit Office, the register of preliminary notices contains entries where the “other” species caught have not been specified but which have been caught in hundreds and, in some cases, thousands of kilograms. For example:

- About the year 2006, the register of preliminary notices contains ca. 5,000 entries in total, in 88 of which other fish species than sprat and herring were also caught but, with 20% of entries containing other species, the fish species were not specified.
- In 2007 the species were not specified in 40% of the 98 entries containing other species.

57. Although landing of cod should come under special attention, there are some cases in the register of preliminary notices where cod has not been specified as the species but, according to data of the fishery information system, cod has been landed. The Environmental Inspectorate has, so far, not considered it necessary to add cod separately in the register as landing of the species is on a low scale in Estonia.

58. Noticeable too is the poor quality of the register of preliminary notices and the data entered have not been checked technically (e.g. the fishing number and name of the vessel are in contradiction, the notice entered is not complete).

59. **The National Audit Office is of the opinion** that if the fish species on board have not been specified, the Inspectorate cannot control the catching of cod as a priority nor check the accordance of fishing data on other species with the fish quantity indicated in the fishing log and on board a vessel. Although the proportion of landings of cod at Estonian ports is minimal, a level of control meeting the requirements must be ensured. Today, the structure and partly the poor quality of the register of preliminary notices does not enable preliminary information on all landings with cod catches to be obtained.

60. **Recommendation of the National Audit Office to the Minister of the Environment:** Ensure high-level reliability of the register of preliminary notices as regards the vessels and fishing data, incl. fish species. Differentiate cod in the register as a separate species (as with sprat and herring).

61. **Recommendation of the National Audit Office to the Ministers of Agriculture and the Environment:** Link the system of preliminary

notices of landing to the fishery information system until the application of the electronic fishing log for all trawlers.

Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations of the National Audit Office. Starting from 1 May 2009, the operating of the 24-hour hotline 1313 of the Environmental Inspectorate will be passed to the Rescue Centre. The Rescue Centre has better technical capability and work experience for improving the quality of the data. In connection with this, the Environmental Inspectorate and the Rescue Centre have conducted sufficient preparatory work to make the transition as smooth as possible and improve the quality of the service. The Emergency Centre has been provided with lists of all ports, vessels and captains previously entered into the system to avoid entry errors on registration. In registration by the Rescue Centre of notices concerning the species composition of catches, cod has been entered as a separate species. The Ministry of the Environment will assign the Environmental Inspectorate the task of developing, in cooperation with the Ministry of Agriculture, an IT solution for linking the register of notices of landing with the fishery information system.

Response of the Minister of Agriculture: The Ministry of Agriculture does not consider it necessary to link the register of preliminary notices to the fishery information system as, at the moment, work is in progress for the implementation of the electronic log system, which preliminary notices also form a part of and which is planned to be launched in 2010. The Ministry of Agriculture is planning to introduce electronic reporting of fishing data for the entire trawler fleet by 2010, which would ensure a single database about the whole sector.

The satellite-based vessel monitoring system can be used in control more efficiently

VMS (vessel monitoring system) – a satellite-based monitoring system of fishing vessels which transmits from fishing vessels to the fisheries monitoring centre data on the location, course and speed of the vessel.

62. In the control of compliance with fishing requirements it is important to monitor the actual movement of vessels to check whether the vessel submits correct information on its catches and landings. Fishing vessels must be equipped with a satellite-based autonomous vessel monitoring system¹¹ (hereinafter referred to as **VMS**) by means of which it is possible to establish the location of a vessel and identify a vessel by means of a remote monitoring system¹². This requirement applies to fishing vessels over 15 m long which also fish outside the baseline of the territorial waters of the member state.

63. VMS equipment installed on vessels automatically communicates to the relevant monitoring centre data on the fishing vessel: the location along with the time, date, the speed and course. The monitoring centre must receive VMS data from a vessel at least once an hour or if the monitoring centre has other options for establishing the actual location of

¹¹ Fishing Act (RT I 1995, 80, 1348) §24²; Article 3 of the Council Regulation (EEC) no. 2847/93.

¹² Commission Regulation (EC) no. 2244/2003, setting out detailed provisions regarding satellite-based Vessel Monitoring Systems.

the vessel at least once every two hours. Vessels may not leave a port without a functioning VMS without the permission of the Environmental Inspectorate.

64. The fisheries monitoring centre of the Environmental Inspectorate must monitor fishing vessels sailing under the flag of Estonia in any waters or ports and the fishing vessels of other states if these are located in Estonian territorial waters or the exclusive economic zone. The member states are required to use the information received by means of VMS for efficient monitoring of fishing.¹¹

65. VMS offers important opportunities for cross-checking different fishing data, for example, for checking the accuracy of the information entered in the fishing log, the date and time of landing, detection of fishing in a prohibited area etc. Such cross-checks must be archived for at least three years.¹³

66. In Estonia VMS has been applied since 2001 and the system was renewed in 2006 when the information became accessible to users on the Internet. In addition to the Environmental Inspectorate as the administrator of the system of the fisheries monitoring centre, the staff of the Border Guard and more seldom users of the Ministries of the Environment and Agriculture also use VMS.

67. The Environmental Inspectorate mainly bases its control of landings of fishing vessels on preliminary notices sent by the captains two hours prior to the landing of the vessel. Therefore it is important to know whether all vessels coming from fishing to a port for landing submit a relevant preliminary notice which meets the requirements. The Environmental Inspectorate does not have such information. By analysing VMS data and the data of the register of preliminary notices it is possible to establish if there are vessels which have landed without notifying the Environmental Inspectorate. The Inspectorate has not yet conducted such analyses.

68. Analysing VMS data is the task of the fisheries monitoring centre of the Environmental Inspectorate. The National Audit Office asked the Environmental Inspectorate to present the results of cross-checks performed by them on the basis of VMS data for the period from 2005-2007. The Environmental Inspectorate has not routinely compared VMS data to the data of the fishery information system and to the data on preliminary notices of landing. The Environmental Inspectorate presented an analysis of fishing trips of 20 vessels in 2006, where the fishing ground indicated in the fishing log is compared with the VMS coordinates. With some fishing trips it has been detected that the vessel had been outside the reported fishing square and moved at a speed suitable for trawling. However, according to the Environmental Inspectorate, it is necessary to have, in addition to VMS data, additional evidence to prove fishing in a prohibited fishing square.

69. At the proposal of the National Audit Office, the Environmental Inspectorate analysed, in the course of the audit by way of comparison,

¹³ Council Regulation (EC) no. 52/2006.

Data of VMS are not compared to preliminary notices of landing and they are not integrated in the fishery information system

the relevant data from VMS and data on preliminary notices of landing. The initial analysis of the data has revealed cases when a vessel had probably been fishing but had not submitted a notice of landing to the Environmental Inspectorate.

70. So far, the VMS information on the location data of vessels has not been linked to the new fishery information system, which would enable an analysis of whether the data of the log on the fishing area are accurate. At present, VMS data are gathered in the fisheries monitoring centre of the Environmental Inspectorate and the location information received from vessels is not integrated into other information systems.

71. Linking VMS data to the new fishery information system was initially in the draft project, but as the Ministry of Agriculture said, they considered it necessary to wait for the implementation of the technical solution of the electronic fishing log system, which must be ready by the end of 2009. In the new system, future interfacing with VMS has been considered.

72. It is not planned to interface with the new FIS the register of preliminary notices of landing, which has, so far, been kept separately by the Environmental Inspectorate. In developing the new FIS, the Ministry of Agriculture has assumed that the electronic log system would replace the need for submission of preliminary notices.

73. **The National Audit Office is of the opinion** that the Environmental Inspectorate has used VMS, as regards the Baltic Sea, more in individual cases for the specification of information but has conducted no regular data analyses. The Environmental Inspectorate has not used VMS data to establish if there are vessels from which fish have been landed at ports without submitting to the Inspectorate the relevant preliminary notice. Thus an important means of control has not been used that would help direct resources for control of the activities with a higher risk.

74. **Recommendation of the National Audit Office to the Minister of the Environment:** Make use of the data of VMS more efficient in control of fisheries: perform regular cross-checks of VMS, fishing logs and preliminary notices of fishing vessels and analyse contradictions in VMS data and the data of preliminary notices of landing.

75. **Recommendation of the National Audit Office to the Ministers of Agriculture and the Environment:** Link VMS data on the movement of fishing vessels to the fishery information system to enable more efficient checking of the fishing data of vessels in a single information system.

Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations and will assign the Environmental Inspectorate the task of using the data of VMS in their everyday work to cross-check them with fishing data and develop, in cooperation with the Ministry of the Agriculture, an IT solution for linking VMS data to FIS.

Today inspectors of the Environmental Inspectorate perform selective cross-checks of VMS data and data of fishing logs in accordance with inspection raids and procedures. As the different databases (VMS and FIS) are not yet linked, it is difficult and complicated to perform comprehensive cross-checks of data of VMS and fishing logs covering

the entire fleet. Despite this, the Environmental Inspectorate is planning to increase the frequency of cross-checks of fishing logs, preliminary notices and VMS data in 2009. Up to now they have taken into consideration that as the electronic log system will be launched in 2010 linking the existing system to FIS is not reasonable.

Response of the Minister of Agriculture: Similarly with preliminary notices linking the database of positioning data of fishing vessels to the fishery information system is not reasonable, as positioning data form part of the electronic log system. The application would be completed simultaneously with the implementation of the electronic log system.

Control authorities have little technical capability for control on the open sea

76. To implement the common fisheries policy, the EU has enforced a control system according to which each member state must, on its own, control fishing and related activities in its territory and the waters under its jurisdiction or sovereignty.¹⁴ Thus a state must have a complete overview of and control over what is happening both in its territorial waters and the exclusive economic zone. Control over activities in its exclusive economic zone is necessary, for example, for preventing the transshipment of fish to vessels from countries not belonging to the EU ('third countries'), which is a requirement of the EU Control Regulation. To achieve more efficient control, the EU is planning to prohibit all transshipment of fish at sea.

77. The Border Guard uses the marine monitoring system combined with VMS to monitor the sea. *[From here a sentence has been deleted, classified, at the proposition of the Border Guard, as internal information for five years pursuant to clause 35 (1) 10) of the Public Information Act, wherein the restriction of access to the information can be extended for another five years or until the circumstances requiring the restriction cease to exist.]* Efficient control of fishing vessels is difficult because of the absence of an information system linked to the marine monitoring system that would enable the making of automatic enquiries in the registers and other databases. Background information on vessels must be obtained by radar operators from other information sources separately, which is time-consuming, and the data may be incomplete and outdated. Renewal of the marine monitoring system of the Border Guard (stage 2 of the marine monitoring system, enabling automated enquiries from external registers) has been planned for 2012-2013. By means of VMS it is possible to obtain information about a vessel (in the case of fishing vessels) which cannot be received from the marine monitoring system. VMS enables the monitoring of fishing vessels in any waters. To achieve better results in control there is a need, according to the Border Guard, to better integrate VMS with the marine monitoring system until the implementation of the marine monitoring information system.

¹⁴ Council Regulation (EEC) no. 2847/93 establishing a control system applicable to the common fisheries policy.

The new control vessel Valve will improve fisheries control capacity

78. To gain control over the activities of fishing vessels in the Estonian exclusive economic zone, patrolling by control vessels is necessary. According to the Border Guard, one problem is the poor technical condition of border guard vessels due to their age, which restricts intensive use. In November 2008 the building of a new control vessel, Valve – which is 23.7 m long and manned by a crew from the Border Guard, thereby also fulfilling the aims of the control of fisheries – was completed.

79. The Environmental Inspectorate considers that the new vessel will considerably improve the capability of control on the open sea and Estonia will also be able to participate in international control missions. The Environmental Inspectorate has a cooperation agreement with the Border Guard, according to which the Inspectorate can use the helicopter Enström 480B for environmental control with 24 hours' notice or, in crisis and extraordinary situations, with 2 hours' notice.

80. **The National Audit Office is of the opinion** that the technical equipment of control authorities has improved to some extent in recent years but that the most problematic field is the control capacity in Estonia's exclusive economic zone outside territorial waters.

81. /---/ *[The second part of the sentence is classified, at the proposition of the Border Guard, as internal information for five years pursuant to clause 35 (1) 10) of the Public Information Act, wherein the restriction of access to the information can be extended for another five years or until the circumstances requiring the restriction cease to exist.]* In these areas, the only information source about fishing vessels is VMS but the VMS requirement does not apply to vessels sailing under the flags of third countries. Thus it is not very probable that an overview of the activities of vessels which do not have a VMS or the functioning of whose VSM is disturbed will be obtained.

Response of the Minister of the Environment: The Ministry of the Environment will recommend to the Environmental Inspectorate to expand cooperation with the Border Guard and other agencies to make better use, for the control of fisheries, of the technical means that the state already has and data concerning the fisheries area. The Environmental Inspectorate has entered into a cooperation agreement with the Border Guard according to which the Inspectorate can use the floating vessels of the Boarder Guard which enable inspections on the open sea without any additional costs. The Border Guard has been given access to VMS data.

The Ministry of the Environment notes that only vessels of member states of the European Union may fish in Estonia's exclusive economic zone and they all must be equipped with a VMS. So far, vessels of third countries may not fish in Estonian territorial waters, and they can only fish in the exclusive economic zones of EU member states in the event that a relevant fisheries agreement has been signed between the European Union and the third country. Pursuant to Article 28c of the Council Regulation no. 2847/93, all vessels sailing under the flags of third countries which are over 24 m long and operate in EU waters must be equipped with a VMS approved by the European Commission.

Development of the fishery information system

82. Management of fisheries – planning of catch volumes, issuing of fishing permits and monitoring of fishing – requires a complete overview of catch limitations, fishing data, fishing gear etc. This information is also necessary for control authorities to observe the fulfilment of the established requirements. The fisheries and the fishing permits data are processed in the fishery information system since 2006 by the Ministry of Agriculture.

83. FIS was created as a work tool of the Ministry of the Environment for the management and control of the fisheries area in 2004. The developer of FIS, who has also ensured its technical functioning, is the Information and Technological Centre of the Ministry of the Environment. FIS is also used by the Environmental Inspectorate for the control of fisheries and by researchers for assessment of the state of fish resources.

84. FIS contains data concerning commercial fishing (permits, fishing data, landing declarations and the declarations of the discharge of fish, sales notes, the register of fishing vessels etc.) from 2004-2008. Since 2005 FIS has contained data on recreational fishing, fishing cards, fish restocking permits, restocking records, special fishing permits, mobile phone payments for recreational fishing and permits for using electric fishing gear.

The fishery information system has shortcomings

85. In connection with dividing the functions of the management of fisheries between the Ministry of the Environment and the Ministry of Agriculture, the use of the fishery information system also had to be divided according to the respective tasks. In June 2006 the Ministry of the Environment passed over to the Ministry of Agriculture the part of the fishery information system concerning the national register of fishing vessels and commercial fishing permits. The instrument also prescribed entry into a cooperation agreement between the Ministry of the Environment and the Ministry of Agriculture on the division of administration and financing of the fishery information system (incl. the register of fishing vessels) but conclusion of a relevant agreement was not reached.

Table 4. Division of the management of the fisheries area between the Ministry of the Environment and the Ministry of Agriculture¹⁵ since 2005

Ministry of the Environment	Ministry of Agriculture
- Assessment of fish resources; - Establishment of catch volumes and catch limitations; - Management of recreational fishing; - Protection of fish resources, restoration of fish habitats; - Re-establishment of fish resources at fish farms	- Management of commercial fishing, incl. distribution of fishing opportunities between fishermen and undertakings; - Issuing of commercial fishing permits; - Keeping records of fishing data, incl. gathering, entering and processing of data on commercial fishing in FIS - Fish processing and fish trade, market organisation; - State support and support from the Fisheries Fund

Source: National Audit Office

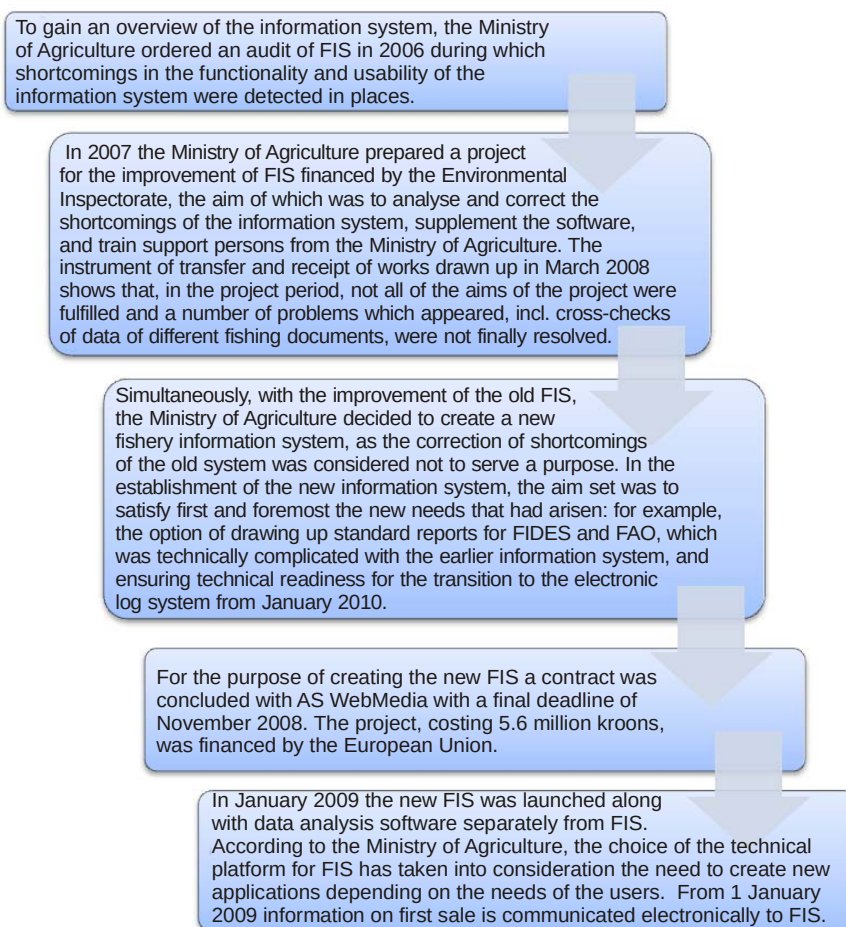
¹⁵ Act amending the Fishing Act, RT I, 28.12.2004, 89, 609.

86. To gain an overview of the information system, the Ministry of Agriculture ordered an audit of FIS, which detected shortcomings in the functionality and usability of the information system..

87. Together with the results of later analyses, the following shortcomings were detected in FIS:

- The quality of the data needs improvement. Application of the control rules is not sufficient on entry of data and the integrity and logical links of the data are insufficient;
- The information system enables the same data to be entered twice, which makes the work time-consuming;
- FIS is not user friendly;
- Reports needed in several relevant areas (automatic reports to international organisations, risk control reports etc.) do not exist, are not correct or users cannot use them;
- Further development of the system is difficult due to the absence of technical documentation on the system;
- The technical platform of the system needs to be renewed.

Figure 4. Activities of the Ministry of Agriculture in development of the fishery information system. The total expenses on the development of the new information system (FIS) have been ca. EEK 7 million.



Source: National Audit Office, data of the Ministry of Agriculture

88. Since January 2009 FIS was implemented on a new IT platform, which, according to the Ministry of Agriculture, will eliminate the earlier technical problems. The quality of data is expected to improve at the beginning of 2010 when the electronic log system (for vessels over 24 m long) will be launched, enabling communication of data from a fishing vessel straight to FIS.

89. However, there are still problems with the data from previous years. The errors in them distort long-term trends of fishing statistics and thus affect assessments of fish resources.

The fishery information system does not cover the entire fishery information

90. FIS must assemble essential fishing data into a single information system to enable easy access to integral data and their processing for the purpose of assessing fish resources and management and control of fisheries.

With the renewal of the fishery information system, the earlier integral system has been divided in two

Users of FIS:

- Ministry of Agriculture, which analyses fishing data and draws up overviews and reports for the European Commission and international organisations (FAO, FIDES).
- Ministry of the Environment and researchers, who assess the state of fish resources on the basis of the monitoring and fishing data, on which the appropriate catch volumes and catch limitations established are then based.
- Control authorities (Environmental Inspectorate and Veterinary and Food Board), who conduct the control of compliance with fishing, fish treatment and selling requirements.

91. Since the launching of the new FIS in January 2009, both the new and old information system have functioned in parallel. The administration of the old information system will be continued by the Ministry of the Environment as regards recreational fishing and special fishing permits and the new FIS will be administered by the Ministry of Agriculture regarding data on commercial fishing. Several users (the Environmental Inspectorate for control, the Ministry of the Environment and researchers from the Marine Institute for assessment of fish resources and the fishing effort etc.) must use both the systems to perform their tasks.

92. Although the Ministry of the Environment and the Environmental Inspectorate still have no experience in using the new information system (the Ministry of the Environment, for example, did not have access to the analysis software for half a month following the launching of the system), they are both of the opinion that work with a single information system would definitely be more user-friendly than using two separate systems. But neither of them assumes that two different fishery systems would directly hinder work, as the information systems contain different data.

93. The Ministry of Agriculture as the developer of the new FIS was, at the beginning of the project, also interested in integrating the recreational fishing part. The Ministry of the Environment found that development of a completely new information system was unreasonably costly and the problems of the existing information system could be resolved with lesser expense on correcting and supplementing the system. The earlier FIS, for instance, is based on free software and the new FIS on commercial software. With joining the new information system the Ministry of the Environment would have lost the earlier technical developments: the option to apply for a fishing card and to submit data on fish caught on the basis of the fishing card by using the ID card and submit landing and transshipment data by SMS, as well as several other options which must be ensured pursuant to the acts of law but which are not contained in the new FIS.

94. Now both the Ministry of Agriculture and the Ministry of the Environment are developing the information systems in their administrations separately. The Ministry of Agriculture is preparing to acquire an interface that will enable the implementation of the electronic log. The Ministry of the Environment is preparing the procurement of a supplementation of the old FIS with new modules for enquiries about data on recreational fishing.¹⁶

95. The total expenses incurred on the creation and development of the old FIS in the period from 2001-2008 were ca. EEK 1.65 million (EEK 1.47 million from the Ministry of the Environment and EEK 177,000 from the Ministry of Agriculture). The cost of the creation and development of the new FIS is ca. EEK 7.2 million.

¹⁶ Initial task of the simplified procurement procedure Development of the fishery information system, drawn up by the Ministry of the Environment on 6.2.2009. Annex to the Minister's Directive no. 99 of 20.01.2009.

96. The National Audit Office is of the opinion that the Ministry of the Environment and the Ministry of Agriculture have not been able to cooperate successfully in development of a single fisheries information system that would enable integrated administration, processing and analysing of fishing data on a single IT basis. During the creation of the new FIS, the effects and risks of dividing the information system were not assessed on the basis of the needs of the users who need to work with data on both recreational and commercial fishing. Due to the dividing of fishery information in different information systems, the needs of data analysis suffer and the searching of necessary information in the information system may be too difficult for users.

97. The position of the National Audit Office is that, in the longer term, the development of two separate information systems is more expensive than the development of a single information system and, therefore, the combining of the information systems is also necessary to achieve smaller administration and development costs.

The new fishery information system does not yet contain the electronic log application

98. An aim in the creation of the new FIS was to ensure the readiness for implementation of the electronic log system starting from 1 January 2010 (for fishing vessels over 24 m long; deadline of 1 January 2011 for vessels over 15 m long). The requirement has been established by the European Commission to make the control of fisheries more efficient and reduce illegal fishing.¹⁷

99. The new electronic log system will enable the electronic transmission of fishing data from a fishing vessel to the fishery information system, thus making the observation of catches almost in real time possible (a fishing vessel must report its fishing data at least once every 24 hours). This is important both for the observation of catch volumes and control of compliance with fishing regulations. At present, captains of fishing vessels must enter data on catches and the fishing place on the pages of their fishing logs and communicate these to the Ministry of Agriculture twice a month, after which the officials enter the data manually in FIS. Landing data must be communicated to the Ministry of Agriculture within 48 hours. With the implementation of the electronic log system, there will no longer be a need for the Ministry of Agriculture to enter the fishing data from fishing logs of vessels manually to FIS, which has been, so far, done by three specialists from the ministry.

100. For the transition to the electronic fishing logs, it is necessary to create an electronic log system where captains of fishing vessels enter fishing data and which communicates these data electronically to the fishery information system. The new FIS has the technical readiness for interfacing with the electronic log system, but the new system has not yet been created.

¹⁷ Commission Regulation (EC) no. 1077/2008, setting out detailed rules for the implementation of Council Regulation (EC) no. 1966/2006 on the electronic recording and reporting of fishing activities and on the means of remote sensing and repealing Regulation (EC) no. 1566/2007.

Development of the electronic log system has been delayed

101. To develop the electronic log system, the Ministry of Agriculture has drawn up a project with a cost of ca. EEK 11 million for which full financing has been applied for from the European Union through the fisheries control programme (the applicant is the Environmental Inspectorate, and the estimated cost of the acquisition and implementation of the electronic log system is EEK 10.217 million). At the same time, the Ministry of Agriculture, in February 2009, also submitted a financing application to the Environmental Investment Centre for the introduction of the electronic log system in the total amount of EEK 11.595 million. By April 2009 the financing scheme of the project remained completely uncertain. The potential financing share of the European Commission and the required self-financing are still unclear, which is why the Ministry of Agriculture applied for the total cost of the project, excluding the necessary self-financing, from the Environmental Investment Centre. Consequently, it is not clear if it will be possible to adhere to the schedule of development of the electronic log system. According to the project, it is planned to find the best bidder for the electronic log system by June 2009 and implement the system by the end of 2009.

102. A possible financing source is the resources of the European Fisheries Fund administered by the Ministry of Agriculture, for the use of which an implementation plan for 2007-2013 has been drawn up for the European Fisheries Fund. The latter contains, for example, the measure “Investments on board fishing vessels and selectivity” which, based on the assessment of the National Audit Office, should also be appropriate for financing the development of the electronic log system. Overall, a minimum amount of the sum from the European Fisheries Fund has been used. An overview of the use of foreign means¹⁸ drawn up by the Ministry of Finance shows that only ca. 1% of the EEK 1.32 billion budget (1.76 billion with Estonian co-financing) of the seven-year budget period of the Fisheries Fund has been made use of so far (the cost of projects approved so far is ca. EEK 15 million). Although 16 different measures were planned to be applied for use of the sum from the European Fisheries Fund, only four measures had been launched by the end of January. The rest of the measures, incl. “Investments on board of fishing vessels and selectivity”, are planned to be launched during 2009. A reason given for the situation is that the European Commission only approved the Estonian implementation plan of the European Fisheries Fund in December 2007 and thus the application for measures was modest in 2008. Estonia has not been able to fully use the means from the Financial Instrument for Fisheries Guidance of the EU programming period 2004-2006 either, of which ca. EEK 17 million were not used.

103. The National Audit Office is of the opinion that the Ministry of Agriculture is late in developing the electronic log system, and that the implementation of the system by the deadline established by the EU is becoming unreal. Financing is uncertain, but at the same time most of the sum from the European Fisheries Fund has not yet been used.

¹⁸ Ülevaade välisvahendite kasutamisest 31.01.2009. a seisuga (An overview of the use of foreign means as of 31.01.2009). Ministry of Finance, 20.2.2009.

104. Recommendations of the National Audit Office to the Ministers of the Environment and Agriculture:

- Analyse, in cooperation between the two ministries, the functioning of the fisheries area after 2006, when coordination of the area was divided between the two ministries to make management of and cooperation in the area more effective.
- Integrate the two separate information systems of the fisheries area into a single information system to enable uniform management, processing and analysing of fishery information in the future.

105. Recommendation of the National Audit Office to the Minister of Agriculture: Ensure the implementation of the electronic log system by the deadline, enabling operative communication of fishing data straight from vessels to the fishery information system.

Response of the Minister of Agriculture: The Ministry of Agriculture made, based on their practice of more than three years, preliminary proposals and presented its visions in a letter to the Prime Minister and the Minister of the Environment on 10 March 2009. The area certainly requires analyses of a period longer than three years to establish whether the objectives set by changing the administration have been achieved.

The Ministry of Agriculture is ready for integration of the fishery information systems referred to in point 92 of the audit report.

Now, preparation of the procurement is under way, in the course of which we have submitted an application to the fund for preparation of the common fisheries policy.

Response of the Minister of the Environment: Regarding this recommendation, the Ministry of the Environment agrees with the need to form a working group between the ministries and agencies involved in the management of fisheries to analyse the functioning and efficiency of the current management of fisheries. The task of the working group would be to present, if necessary, proposals for improvement of the management of the fisheries area, taking into account the requirements set out in the draft Council Regulation establishing a Community control system for ensuring compliance with the rules of the common fisheries policy. According to the provisions of this draft regulation, in each member state a single authority must coordinate the control activities of all national control authorities and be responsible for coordinating the collection and verification of information on fishing activities.

The Ministry of the Environment will assign the Information and Technological Centre the task of developing, in cooperation with the Ministry of Agriculture, an IT solution to unite the two existing separate information systems.

/signed digitally/

Tarmo Olgo
Director of Audit, Performance Audit Department

Recommendations of the National Audit Office and responses of the Ministers of the Environment and Agriculture

The National Audit Office gave, on the basis of its audit, several recommendations to the Ministers of the Environment and Agriculture. The Ministers sent their responses to the recommendations of the National Audit Office on 29 and 30 April 2009.

General comments on the audit report

Minister of Agriculture: The Ministry of Agriculture took important steps towards improving the quality of data and promoting the area of data processing and analysing in 2008. A new fishery information system has been developed and the data analysis and reporting software Business Object has been implemented for processing fishing data. Unfortunately, the time of conducting the audit was one when the old environment was no longer being developed and the transition to a new one was under way. However, the audit has clearly shown that our steps were necessary.

The questions raised in the draft audit report need more thorough discussion and consideration and the recommendations presented are helpful for the preparation of analyses and for further activities, primarily in the planning of acts of law and development of IT systems.

In the draft audit report "Control of fishing in the Baltic Sea" the task set under the heading "What did we audit?" states that management and control of commercial fishing were audited. We draw your attention once again to the fact that the relevant area (commercial fishing) has always been in one and the same information system and we ask you to remove the ambiguous references suggesting that the area (commercial fishing) was divided between two separate systems.

The Border Guard coordinated the audit report and requested that the second sentence in point 77 and the first part of the first sentence of point 80 be classified as internal information. The information contained in the mentioned points on the work of radars of the marine monitoring system is, pursuant to clause 35 (1) 10) of the Public Information Act, information meant for internal use only.

Recommendations of the National Audit Office	Responses of the Ministers
Use of the results of analysis of fishing data in control 41. Recommendations to the Minister of the Environment: Base the planning of control on risk assessments: a) Prepare risk assessments on the basis of, <i>inter alia</i>, the results of cross-checking data in the fishery information system; b) Ensure that persons who have committed fishing violations more frequently are inspected relatively more frequently. (points 26–40)	Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations of the National Audit Office and will assign the Environmental Inspectorate the task of taking the recommendations into account in the preparation of its annual work plan. The flexible reporting module created in the new fishery information system enables the performance of regular cross-checks of fishing and landing data, which helps the Environmental Inspectorate to better plan its work better.
42. Recommendations to the Minister of Agriculture: - Ensure the functioning of the fishery information system in such a way that it would enable control authorities to conduct flexible and quick cross-checking analyses. Preconditions for this have been created with the new fishery information system which was implemented at the beginning of 2009 and includes a separate analysis module. - Conduct cross-checking analyses of data of the fishery information system, since the Ministry of Agriculture as the administrator of the information system has the necessary competence for use of the information system and the possibility to check data, in the case of considerable discrepancies, on the basis of documents submitted. Communicate results of cross-checks to the Environmental Inspectorate for planning and performance of control activities. - Following the successful implementation of the	Response of the Minister of Agriculture: The fishery information system of the Ministry of Agriculture has been implemented, user training has been carried out, incl. for the Environmental Inspectorate on 4 February in Tartu, on 5 March in Tallinn and on 11 March in Pärnu. At present the necessary technical means for performing cross-checks have been provided. Performance of cross-checks has been passed over to the Environmental Inspectorate both regarding the fisheries information system and the reporting and analysis software processing fishing data, which, in our estimation, enables the making of control enquiries and finding, for analysis, different deviations from the norm in fishing activities particularly well. In cooperation with the Environmental Inspectorate two discussions/training courses have been held: On 16 February in Tallinn and a training course on the reporting software on 9 April in the Ministry of Agriculture.

Recommendations of the National Audit Office	Responses of the Ministers
fishery information system and training of users, pass the performance of cross-checks over to the Environmental Inspectorate. (points 26–40)	
Control of landings of trawlers 51. Recommendations to the Minister of the Environment: ■ Improve control of landings primarily in Ida-Virumaa and Lääne-Virumaa as well as in Harjumaa and Hiiumaa and make the level of control of landings in different regions and with different vessels uniform, also taking into account risk assessments. ■ Involve fishery inspectors of other counties in the inspections. This would help exchange of experience in risk assessment and control and reduce the danger of unfair treatment of fishing vessels. ■ Ensure control of documenting the inspection activities and high-level reliability of the register of object control protocols, marking the fish quantities (primarily of cod) inspected by sampling on it. (points 43–50)	Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations and will assign the Environmental Inspectorate the task of considering the recommendations in preparation of its annual work plan and improving the documenting of inspection activities by continuing, <i>inter alia</i>, the training of inspectors for this purpose. Since 2008 the Environmental Inspectorate has intensified control of landings of fresh fish at ports in the Northern region and paid more attention to the precision of determining the species composition of fish catches. This year, seven misdemeanour procedures have been initiated against captains of trawlers because of incorrect determination of species composition of fish. In the Northern region the aim has been set of more intense control in small ports situated further from Tallinn. On 1 October, the Environmental Inspectorate will launch the new inspection registration system OKAS, facilitating the completion and registering of control protocols. OKAS will make it possible to process and analyse the majority of the results of control conducted by inspectors. In OKAS a larger number of departmental forms of control of fisheries will be applied than previously, helping to unify the conducting and level of control in the entire Environmental Inspectorate.
Use of preliminary notices of landing of fishing vessels in control 60. Recommendation to the Minister of the Environment: Ensure high-level reliability of the register of preliminary notices as regards the vessels and fishing data, incl. fish species. Differentiate cod in the register as a separate species (as with sprat and herring). 61. Recommendation to the Ministers of Agriculture and the Environment: Link the system of preliminary notices of landing to the fishery information system until the application of the electronic fishing log for all trawlers. (points 52–59)	Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations of the National Audit Office. Starting from 1 May 2009, the operating of the 24-hour hotline 1313 of the Environmental Inspectorate will be passed to the Rescue Centre. The Rescue Centre has better technical capability and work experience for improving the quality of the data. In connection with this, the Environmental Inspectorate and the Rescue Centre have conducted sufficient preparatory work to make the transition as smooth as possible and improve the quality of the service. The Emergency Centre has been provided with lists of all ports, vessels and captains previously entered into the system to avoid entry errors on registration. In registration by the Rescue Centre of notices concerning the species composition of catches, cod has been entered as a separate species. The Ministry of the Environment will assign the Environmental Inspectorate the task of developing, in cooperation with the Ministry of Agriculture, an IT solution for linking the register of notices of landing with the fishery information system. Response of the Minister of Agriculture: The Ministry of Agriculture does not consider it necessary to link the register of preliminary notices to the fishery information system as, at the moment, work is in progress for the implementation of the electronic log system, which preliminary notices also form a part of and which is planned to be launched in 2010. The Ministry of Agriculture is planning to introduce electronic reporting of fishing data for the entire trawler fleet by 2010, which would ensure a single database about the whole sector.
Use of the satellite-based monitoring system of fishing vessels (VMS) in control 74. Recommendation to the Minister of the Environment: Make use of the data of VMS more efficient in control of fisheries: perform regular cross-checks of VMS, fishing logs and preliminary notices of fishing vessels and analyse contradictions in VMS data and the data of preliminary notices of landing.	Response of the Minister of the Environment: The Ministry of the Environment agrees with the recommendations and will assign the Environmental Inspectorate the task of using the data of VMS in their everyday work to cross-check them with fishing data and develop, in cooperation with the Ministry of the Agriculture, an IT solution for linking VMS data to FIS. Today inspectors of the Environmental Inspectorate perform selective cross-checks of VMS data and data of fishing logs in accordance with

Recommendations of the National Audit Office	Responses of the Ministers
75. Recommendation to the Ministers of Agriculture and the Environment: Link VMS data on the movement of fishing vessels to the fishery information system to enable more efficient checking of the fishing data of vessels in a single information system. (points 62–73)	inspection raids and procedures. As the different databases (VMS and FIS) are not yet linked, it is difficult and complicated to perform comprehensive cross-checks of data of VMS and fishing logs covering the entire fleet. Despite this, the Environmental Inspectorate is planning to increase the frequency of cross-checks of fishing logs, preliminary notices and VMS data in 2009. Up to now they have taken into consideration that as the electronic log system will be launched in 2010 linking the existing system to FIS is not reasonable. Response of the Minister of Agriculture: Similarly with preliminary notices linking the database of positioning data of fishing vessels to the fishery information system is not reasonable, as positioning data form part of the electronic log system. The application would be completed simultaneously with the implementation of the electronic log system.
Development of the fishery information system (FIS) 104. Recommendations to the Ministers of the Environment and Agriculture: - Analyse, in cooperation between the two ministries, the functioning of the fisheries area after 2006, when coordination of the area was divided between the two ministries to make management of and cooperation in the area more effective. - Integrate the two separate information systems of the fisheries area into a single information system to enable uniform management, processing and analysing of fishery information in the future. 105. Recommendation to the Minister of Agriculture: Ensure the implementation of the electronic log system by the deadline, enabling operative communication of fishing data straight from vessels to the fishery information system. (points 81–102)	Response of the Minister of the Environment: Regarding this recommendation, the Ministry of the Environment agrees with the need to form a working group between the ministries and agencies involved in the management of fisheries to analyse the functioning and efficiency of the current management of fisheries. The task of the working group would be to present, if necessary, proposals for improvement of the management of the fisheries area, taking into account the requirements set out in the draft Council Regulation establishing a Community control system for ensuring compliance with the rules of the common fisheries policy. According to the provisions of this draft regulation, in each member state a single authority must coordinate the control activities of all national control authorities and be responsible for coordinating the collection and verification of information on fishing activities. The Ministry of the Environment will assign the Information and Technological Centre the task of developing, in cooperation with the Ministry of Agriculture, an IT solution to unite the two existing separate information systems. Response of the Minister of Agriculture: The Ministry of Agriculture made, based on their practice of more than three years, preliminary proposals and presented its visions in a letter to the Prime Minister and the Minister of the Environment on 10 March 2009. The area certainly requires analyses of a period longer than three years to establish whether the objectives set by changing the administration have been achieved. The Ministry of Agriculture is ready for integration of the fishery information systems referred to in point 92 of the audit report. Now, preparation of the procurement is under way, in the course of which we have submitted an application to the fund for preparation of the common fisheries policy.

Characterisation of the audit

Aim of the Audit

The aim of the audit was to analyse the activities of the state in conducting the control of trawling and developing the management of fishing data. The planning of the audit was largely based on issues in the parallel audit “Environmental monitoring and management and control of fisheries in the Baltic Sea” conducted by the control authorities of Baltic Sea countries.

This audit discusses more thoroughly the capability of the state in fulfilling its fisheries control obligations in the Baltic Sea and the use and development of information systems in the management of fisheries.

Criteria for the evaluation

The National Audit Office based its evaluation on the following criteria:

1. Control of trawling in the Baltic Sea:
 - Control uses results of cross-checks of fishing data;
 - Obligations assumed are fulfilled in the control of landings of trawlers;
 - Information contained in the register of advance notices of landing enables the checking of landings of cod as the priority;
 - The satellite-based monitoring system of fishing vessels (VMS) is used efficiently in control;
 - The state controls the activities taking place in its territorial waters and the exclusive economic zone.
2. Administration of fishing data in the fishery information system (FIS):
 - FIS assembles essential fishing data in a single information system to enable simple and integrated access to the data and their uniform processing by IT means;
 - During the development of FIS, the electronic log system will be implemented by the deadline.

Scope and approach of the audit

The audit forms part of the parallel audit “Environmental monitoring and management and control of fisheries in the Baltic Sea” conducted by the control authorities of Baltic Sea countries, of which a joint report was drawn up in January 2009. The topics were chosen according to the issues considered to be most deserving of attention by the audit authorities of the Baltic Sea countries in drawing up the parallel audit. Of these topics, the National Audit Office decided to address more thoroughly the issues needing the most attention for the management and control of fisheries in Estonia.

The audit discusses the functioning of the fishery information system necessary for the management and control of fisheries in the administrative area of the Ministries of the Environment and Agriculture and the performing of cross-checks of fishing data in the Environmental Inspectorate, the control of landings of trawlers at ports and the technical capability of the control of fisheries by means of the satellite-based VMS.

The topics addressed in this audit are limited to fisheries in the Baltic Sea and the fish species for which quota have been established by the EU (herring, sprat, cod, salmon).

To find answers to the main questions of the audit, the following activities were performed:

- The development process of the fishery information system, which has led to a division of FIS into two separate information systems, was analysed. The technical options of both systems were studied.
- The results of the cross-check of fishing data from 2006 and 2007 drawn up by the Ministry of Agriculture were analysed and the analysis revealed discrepancies in the data on fishing, landing and first sale submitted by trawlers.
- The data of the register of advance notices of landings of trawlers and the data of the register of object control protocols presented by the Environmental Inspectorate and the data on violations in the fisheries area were analysed.
- Also the functioning of VMS and its use by different authorities (the Environmental Inspectorate, the Border Guard, the Ministry of the Environment and the Ministry of Agriculture) were studied.
- Interviews were carried out in the Fishery Economics Department and the Fishery Organisation and Data Analysis Bureau (regional offices in Pärnu and Laagri) of the Ministry of Agriculture, the Environmental Inspectorate, the Ministry of the Environment and the Estonian Marine Institute. Also, organisations of fishermen and fish processing undertakings were interviewed (the Estonian Association of Fishery, the Estonian Fishermen Association and the Estonian Fishermen Cooperative).

Time of completion of the audit:

The audit activities were performed in the period from February 2008 to February 2009.

The Audit team:

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An electronic copy of the audit report (pdf) is available on the website www.riigikontroll.ee.

A summary of the audit report is also available in English.

The number of the audit report in the audit system of the National Audit Office is TAO-2-1.4/09/14.

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Earlier audits by the National Audit Office in the fisheries area

20.9.2001 – **Planning and budgeting of the management of fish resources**

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