

Case No: 62007  
Event No: 460468

Brussels, 15 January 2008

**Final report**

**EFTA Surveillance Authority mission to**

**NORWAY**

**15 to 19 October 2007**

**regarding the application of EEA legislation related to**

**health conditions for the production and the placing on the market of**

**fishery products**

Please note that the comments from the Norwegian Food Safety Authority to the factual content of the report have been included in the body of the report in *underlined italic* print.

<b>Contents</b>	<b>Page</b>
<b>1 Introduction .....</b>	<b>3</b>
<b>2 Objectives of the mission.....</b>	<b>3</b>
<b>3 Legal basis for the mission .....</b>	<b>4</b>
<b>4 National legislation .....</b>	<b>4</b>
<b>5 Information on production and trade.....</b>	<b>5</b>
<b>6 Previous missions.....</b>	<b>5</b>
<b>7 Main findings .....</b>	<b>6</b>
<b>7.1 Transposition and application of relevant legislation .....</b>	<b>6</b>
<b>7.2 Competent Authorities.....</b>	<b>6</b>
7.2.1 General information .....	6
7.2.2 Organisation, legal powers and budgetary allocations .....	7
7.2.3 Human resources .....	8
7.2.4 Training of personnel .....	8
7.2.5 Approval and suspension/withdrawal of approval of vessels and fishery products establishments .....	9
7.2.6 Planning of official controls .....	10
7.2.7 Internal audits .....	11
7.2.8 Carrying out of official controls .....	12
7.2.9 Official sampling.....	13
<b>7.3 Laboratories.....</b>	<b>15</b>
7.3.1 General information .....	15
7.3.2 Laboratories visited .....	15
<b>7.4 Establishments visited.....</b>	<b>15</b>
7.4.1 Own-checks system.....	15
7.4.2 Hygiene .....	17
7.4.3 Premises and equipment.....	18
7.4.4 Production .....	18
7.4.5 Packaging, storage and transport.....	18
<b>7.5 Vessels visited.....</b>	<b>19</b>
<b>7.6 Aquaculture farms visited .....</b>	<b>19</b>
<b>8 Final meeting.....</b>	<b>19</b>
<b>9 Conclusions.....</b>	<b>20</b>
<b>9.1 Competent Authority .....</b>	<b>20</b>
9.1.1 Implementation of EEA Acts .....	20
9.1.2 Approval fishery products establishments.....	20
9.1.3 Enforcement .....	20
9.1.4 Training of personnel .....	20
9.1.5 Official sampling.....	20
9.1.6 Own checks including HACCP.....	20
<b>9.2 Farms, vessels and establishments visited .....</b>	<b>20</b>
9.2.1 Conditions related to own-checks systems including HACCP.....	20
9.2.2 Conditions related to hygiene and production .....	20
9.2.3 Conditions related to premises and equipment.....	21
9.2.4 Conditions related to packaging, storage and transport.....	21
<b>10 Recommendations to the Norwegian competent authority .....</b>	<b>21</b>
<b>Annex 1 List of abbreviations and terms used in the report .....</b>	<b>22</b>
<b>Annex 2 Other relevant legislation .....</b>	<b>23</b>
<b>Annex 3 Information on production and trade .....</b>	<b>25</b>

## 1 Introduction

The mission took place in Norway from 15 to 19 October 2007. The mission team was composed of three inspectors from the EFTA Surveillance Authority (the Authority) and two observers from the Food and Veterinary Office (FVO) of the European Commission. Apart from at the opening and final meetings the mission team was split in two sub-teams, each visiting different parts of the country.

The opening meeting was held with representatives of the Ministry of Health and Care Services, the Ministry of Fisheries and Coastal Affairs and the Norwegian Food Safety Authority (NFSA) on 15 October 2007 at the NFSA's head office in Oslo. At this meeting the representatives of the two Ministries and of the NFSA provided additional information to the Norwegian reply to the Authority's pre-mission questionnaire.

The previous mission in the field of health conditions for the production and the placing on the market of fishery products was carried out in Norway in 2005.

Throughout the mission, representatives of the head office of the NFSA *from section of fish and seafood* in Bergen accompanied the two sub-teams. In addition, representatives of the regional office and the relevant district offices of the NFSA participated during the meeting at the regional office and the meetings at the district offices visited. Representatives from the relevant regional and district offices also participated during the visits to the farms, laboratories, vessels and establishments.

A final meeting was held at the NFSA's head office in Oslo on 19 October 2007, at which the mission team presented its main findings and some preliminary conclusions from the mission.

The abbreviations used in the report are listed in Annex 1.

## 2 Objectives of the mission

The main objective of the mission was to assess the application by the Norwegian competent authorities (CAs) of Council Directive 91/493/EEC on health conditions for the production and the placing on the market of fishery products, and related legislation (see Chapter 3 and Annex 2 to this report). In particular, emphasis was put on the performance of the competent authority in relation to the planning of official controls, the approval of fishery products establishments (including vessels), the carrying out of official controls (including the level of assessment of documentation and facilities, reports from visits, follow-up of findings and enforcement of legislation), official sampling and, finally, training of staff.

The meetings with the NFSA and the visits to laboratories, aquaculture farms, vessels and establishments during the mission are listed in Figure 1. None of the vessels visited were on the agenda agreed before the start of the mission.

**Figure 1: Competent Authority, laboratories, aquaculture farms, vessels and establishments visited during the mission**

	Number	Comments
<b>Competent Authority</b>	7	Two meetings with the head office (opening and final meeting), one meeting with a regional office and four meetings with three different district offices.
<b>Laboratories</b>	2	Two visits to laboratories analysing samples from aquaculture farms, fishery products establishments and official samples.
<b>Aquaculture farms</b>	2	Two visits to salmon producing farms.
<b>Vessels</b>	3	One fishing vessel from the coast fleet, one fresh fish trawler and one vessel where seawater was refrigerated by mechanical means for chilling of fishery products (RSW) were visited at the quayside, two of them during unloading.
<b>Establishments</b>	7	Five processing establishments, one cannery and one aquaculture slaughterhouse/processing establishment were visited.

### 3 Legal basis for the mission

The legal basis for the mission was:

- a) Point 4 of the Introductory Part of Chapter I of Annex I to the EEA Agreement.
- b) Article 1(e) of Protocol 1 to the Agreement between the EFTA States on the Establishment of a Surveillance Authority and a Court of Justice (Surveillance and Court Agreement).
- c) The Act referred to at point 1.2.74 of Chapter I of Annex I to the EEA Agreement, *Commission Decision 98/139/EC of 4 February 1998 laying down certain detailed rules concerning on-the-spot checks carried out in the veterinary field by Commission experts in the Member States*.
- d) The Act referred to at point 6.1.8 of Chapter I of Annex I to the EEA Agreement, *Council Directive 91/493/EEC of 22 July 1991 laying down the health conditions for the production and the placing on the market of fishery products*, as amended and as adapted to the EEA Agreement by the sectoral adaptations referred to in Annex I to that Agreement, and in particular Article 8 of that Act.

Other legislation relevant for the mission is listed in Annex 2.

### 4 National legislation

The general framework for the functioning of the NFSA is laid down in Act No 124 of 19 December 2003 relating to food safety and plant and animal health (the Food Act). The Food Act also provides the legal basis for regulations in the relevant fields to be adopted by the Ministry of Agriculture and Food, the Ministry of Health and Care Services and the Ministry of Fisheries and Coastal Affairs.

A number of regulations have been adopted by these Ministries in order to incorporate EEA Acts relevant for the handling, processing and distribution of marine products. The

regulations that provides the legal basis for the NFSA's application of Council Directive 91/493/EEC is the *Regulation of 14 June 1996 No 667 relating to the quality of fish and fishery products* as last amended by *Regulation of 1 May 2007 No 7* (adopted by the Ministry of Fisheries and Coastal Affairs). This regulation also implements, *inter alia*, Council Directive 92/48/EEC, Commission Decision 93/51/EEC, Commission Decision 94/140/EC, Commission Decision 2002/225/EC and Commission Decision 2002/226/EC.

Furthermore, by way of ministerial delegation of 5 May 2004, legal power to issue regulations in relation to some of the sections in the Food Act was given to the NFSA.

## 5 Information on production and trade

Annex 3 contains information on the number of aquaculture farms, approved establishments, landing sites, auction markets, factory vessels, freezer vessels and listed fishing vessels in Norway. Furthermore, information is given about the production volume of the main species produced in Norway, as well as the main countries importing Norwegian fishery products, both EEA countries and third countries. Finally, information about countries exporting fishery products to Norway is also included in Annex 3.

## 6 Previous missions

The Authority's previous mission in this field to Norway took place in February 2005. The final report from that mission is available on the Authority's website: <http://www.eftasurv.int/>. During that mission the Authority also assessed the CA's application of Council Directive 91/493/EEC.

In the report from that mission the Authority concluded that, *inter alia*, compliance with Article 7 of Council Directive 91/493/EEC could not always be ensured since the CA had not taken the necessary measures in cases where inspections by the CA had revealed that establishments were not complying with the requirements of Council Directive 91/493/EEC.

Furthermore, the Authority concluded that compliance with Council Directive 91/493/EEC, and in particular Article 7 and points II(1), II(3)(a) and II(4) of Chapter V of the Annex thereto, could not be ensured, since sampling and analyses were not included in the official inspections.

With regard to the establishments visited during the mission in 2005, the Authority concluded that deficiencies related to the own-checks systems were observed in at least one of the establishments visited. For example, procedures for revision were insufficient and procedures for verification of the HACCP plan and keeping of records were missing. Compliance with the requirements of Article 6 of Directive 91/493/EEC and with Decision 94/356/EEC could therefore not always be ensured.

Finally, the Authority concluded in the report from the mission in February 2005 that there was not a clear separation between clean and contaminated parts of the facilities in three of the establishments visited. Some outer doors were not closing properly or not kept closed during processing. Maintenance was not sufficient in one of the establishments

visited. Wooden pallets were observed in the production area in at least one of the establishments visited. Compliance with the requirements in point I and II(A) of Chapter III of the Annex to Directive 91/493/EEC could therefore not always be ensured.

Together with the comments to the draft report from the mission in 2005, Norway provided some information on action already taken. In addition, in the beginning of August 2005 the NFSA also provided a detailed plan for corrective action and information on action taken. All corrective actions were scheduled finalised before the end of 2006.

In January 2007 the Authority carried out a general review mission to Norway. During that mission the NFSA provided detailed information on action taken in relation to some of the issues where information had previously not been submitted to the Authority.

Based on the information provided by Norway the Authority concluded that no issues related to the inspection carried out in 2005 were outstanding at the time of the general review mission in January 2007.

Although the mission in October 2007 was not a direct follow-up mission to the mission in 2005 and to the general review mission in January 2007, some of the findings and the information provided by Norway are relevant also for the mission referred to in this report.

## 7 Main findings

### 7.1 Transposition and application of relevant legislation

According to information provided by Norway in the reply to the pre-mission questionnaire, all relevant legislation currently incorporated into the EEA Agreement has been implemented into national law.

However, during the mission the inspection team observed that point II(3)(A)(b) of Chapter V of the Annex to Directive 91/493/EEC is not correctly implemented in Section 19-1 of *Regulation of 14 June 1996 No 667 relating to the quality of fish and fishery products* as regards the number of official samples to be taken and analysed for histamine.

At the opening meeting representatives of the NFSA informed the mission team that the EC legislation included in the "hygiene package" and the regulations on official control will only be incorporated into Norwegian law after the Joint Committee Decision has entered into force, also taking into account any possible constitutional requirements.

### 7.2 Competent Authorities

#### 7.2.1 General information

It follows from a Royal Decree of 19 December 2003 that the competence to instruct the NFSA is split between the Ministry of Agriculture and Food, the Ministry of Fisheries and Coastal Affairs and the Ministry of Health and Care Services.

The Ministry of Agriculture and Food is responsible for the budgetary allocations to the NFSA, for the co-ordination of the Ministries' activities towards the NFSA, and for legislation covering, inter alia, terrestrial production.

The Ministry of Fisheries and Coastal Affairs is responsible for legislation related to, *inter alia*, aquatic production, the national legislation implementing Council Directive

92/48/EEC on minimum hygiene rules applicable to fishery products caught on board certain vessels and Council Directive 91/493/EEC.

The Ministry of Health and Care Services is, *inter alia*, responsible for national legislation implementing Council Directive 98/83/EC related to quality of water, Commission Regulation (EC) No 466/2001 related to contaminants in foodstuffs, and Directive 2000/13/EC related to labelling, presentation and advertising of foodstuffs.

### **7.2.2 Organisation, legal powers and budgetary allocations**

The NFSA comprises a head office located in Oslo, *Bergen, Sandnes and Ås*, eight regional offices and 62 district offices. The head office is responsible for co-ordinating the organisation's activities including, *inter alia*, preparation of new legislation, eradication of animal diseases and the continuous monitoring of the food chain in general, including animal welfare issues, hereunder inspections of farms, establishments and undertakings.

An internal and external evaluation of the NFSA carried out in 2006 concluded that the complicated and fragmented organisation at national level was the major hindrance for an effective organisation. Following this evaluation an internal process resulted in some significant changes in the organisational structure that took effect from 1 September 2007.

At the opening meeting representatives of the NFSA informed the mission team that the head office now consists of three departments in addition to the staff of the Director General. The three departments are: the Department of Administration (located in Brumunddal, Sortland and Oslo), the Department of Legislation (located in Bergen, Sandnes, Ås and Oslo) and the Department of Controls (located in Bergen, Sandnes, Ås and Oslo). By way of this organisation, the different parts of the previous national centres are now integrated parts of the different Departments at the head office in Oslo.

The Departments of Administration and of Legislation each have 6 sections, while the Department of Controls has 7 sections. The main tasks of the Department of Legislation are establishment of a policy on development of legislation, developing legislation and preparing and establishing regulations regarding protective measures. The main tasks of the Department of Controls are development of policies and strategies for official controls, coordination of official control, interpretation of legislation, development of guidelines, advising and informing on application of legislation, preparation of contingency plans and training of staff, coordinating import and export issues and internal and external audits, and, finally, development and implementation of the new quality management system for official control (MATS).

Within the NFSA, administrative decisions are adopted by the district offices. Any appeals following these decisions are considered by the regional offices. In addition, the regional offices coordinate the activities of their district offices.

Based on the NFSA's budget, decided by the Ministry of Agriculture and Food, the head office of the NFSA determines the specific budgets for the head office and the regional offices. This is followed by a budgetary process at the regional offices in co-operation with their respective district offices. Within the framework agreed with the regional office, the district offices can allocate their budgets as most suits the districts.

Reports on budget and activities are sent from the district offices to the regional offices and from the regional offices to the head office. Special reports are made on the budget,

and other reports are sent every four months in addition to the annual report. The head office is reporting back to the three responsible Ministries.

### **7.2.3 Human resources**

Out of a total of 1 330 employees, approximately 130 work at the NFSA's head office, 200 at the regional level, and 1 000 at district level. In total some 210 staff are working part time, out of which approximately 195 at the district level. Out of a total of 776 inspectors/case handlers approximately 600 work at the district level while slightly less than 100 work at the regional level and almost 80 at the head office.

Management constitute 142 staff in the whole NFSA; 13 at the head office, 28 at the regional level and 101 at the district level.

In at least two of the districts visited representatives of the district offices informed the mission team that due to the lack of human resources in these districts it was neither possible to carry out all the inspections considered necessary, nor perform all the inspections adequately. This was not only of relevance for fishery products establishments, but also for inspection of different types of vessels. Consequently, it was sometimes difficult to follow up properly the establishments where previous inspections had revealed deficiencies.

### **7.2.4 Training of personnel**

In the reply to the pre-mission questionnaire the NFSA informed that a team is working on developing a long-term programme for training of all staff. This programme will comprise an introduction to newcomers, definitions of required competence for inspectors and proposals for adequate training. Furthermore, the programme will contain a policy for courses based on experiences from previous crises etc. and for exchange of staff within the NFSA.

The head office prepares annual training programmes for training organised on a national level. In addition, both regional and district offices can organise training courses as considered relevant for the tasks in the different regions and districts. It is for these offices to allocate funds within the budget from the head office.

At the opening meeting representatives of the NFSA informed the mission team that it is considering to purchase in the near future a system for keeping an overview of all training courses etc. for all NFSA staff.

In the reply to the pre-mission questionnaire the NFSA also informed that during 2006 and 2007 nine two-days seminars on HACCP had been arranged for 270 of the 600 inspectors in the NFSA. The first day of the seminar was used for legal issues and a repetition of the HACCP principles, while the second day was used for preparation of checklists, assessment of HACCP plans and enforcement of legislation in cases of non-compliances. At the opening meeting representatives of the head office informed the mission team that the purpose of the HACCP courses arranged by the head office had been to give an introduction to the HACCP principles. However, external more comprehensive training courses in HACCP could be decided by the regional offices to the extent possible within the budgetary allocations. Finally, due to the implementation of a new part of the system for support of control activities within the NFSA no HACCP training had been planned for 2008.

In 2004 the NFSA organised courses related to fish and seafood. The courses consisted of in total nine modules; molluscs, residues, fishmeal and fish oil, approval and inspections related to fish diseases, import, raw material and processing, fishery processing establishments and HACCP. The majority of the courses lasted two days. Late 2006 the head office also organised a two-day seminar on fish and fishery products for 40 inspectors.

The mission team observed in at least one of the establishments visited that the NFSA had not carried out a detailed assessment of the HACCP plan. Inspectors from the district office informed the mission team that assessment of the HACCP plans prior to audits normally only consists of checking that the necessary elements of an HACCP plan were prepared. On the spot the inspectors usually focus on documentation concerning records.

Representatives of one district office also informed the mission team that sufficient HACCP training on an advanced level had not been made available to the inspectors since before the NFSA was established in 2004. However, representatives of another district office informed the mission team that the training organised within the NFSA related to HACCP was adequate for the assessments they had to do of the establishments' HACCP plans. The reason given for not always carrying out very detailed assessments was lack of time.

Inspectors in one of the districts visited indicated to the mission team that they considered it most relevant to receive training in auditing and basic microbiology.

### **7.2.5 Approval and suspension/withdrawal of approval of vessels and fishery products establishments**

In the reply to the pre-mission questionnaire the NFSA provided detailed information about procedures for approval and suspension/withdrawal of approval of vessels and fishery products establishments. The following description applies to approval of fishery products establishments, factory vessels and freezer vessels.

Criteria for approval of establishments/vessels are laid down in the Norwegian *Regulation relating to the quality of fish and fishery products*. The district offices are responsible for approving/registering vessels and for approving fishery products establishments.

The approval process is initiated by an application signed by the representative of the establishment or vessel. Annexed to the application should be, *inter alia*, the checklist from the establishment's/vessel's own inspection of the facilities, drawings of the facilities where the location of the equipment is indicated, documentation of the quality of the potable water and a draft of the own-checks system (including HACCP).

The district office shall inspect the establishment/vessel before any approval is granted. Checklists are available for use by the inspectors during the inspections. Approvals can only be granted if the establishments/vessels comply with the requirements of the Norwegian Regulation. The approval documents contain the relevant information about the establishment/vessel and the production codes related to the production for which the establishment/vessel is approved. A total of 21 different production codes are available.

Lists of approved or registered vessels and of approved fishery products establishments are available on the homepage of the NFSA.

The Norwegian *Regulation relating to the quality of fish and fishery products* also contains the legal basis for withdrawal of approvals. The district office that approved the establishment/vessel also has the legal power to withdraw the approval. If the district office discovers deficiencies it must, by formal decision, order the deficiencies to be rectified within a given time limit. Only when the time limit has not been met by the representatives of the establishment, the approval may be withdrawn. It follows from the guidelines that deficiencies related to facilities, hygiene and production, the own-checks system and the quality of the water may result in a withdrawal of the approval.

In general the mission team observed that the approval procedures as described at the opening meeting were followed. However, in one of the districts visited representatives of the district office informed the mission team that prior to approval of establishments some establishments' HACCP plan are assessed in detail, whereas others are not. The extent of the assessment depends on the inspectors' prior knowledge of the establishment. However, detailed assessments of the HACCP plan were carried out as part of the preparation of revisions of the establishments.

One establishment visited had only been granted a temporary approval by the former competent authority (the Directorate of Fisheries) due to the establishment's incomplete HACCP plan. According to the former competent authority's procedures a new approval should have been granted when the HACCP plan had been approved. Although the district office had assessed the system, both in 2005 and a few weeks before the mission, the establishment had not been formally approved.

In another establishment visited the mission team observed that, after the initial inspection by the NFSA the establishment had started production although not having received the formal approval from the NFSA.

In one of the districts visited the mission team observed that the NFSA had recently approved a freezer vessel. Upon request from the owner the NFSA had transferred the approval number of a recently sold factory vessel to the new freezer vessel. However, the approval of the factory vessel had not been withdrawn. Furthermore, the list of approved vessels available on the NFSA's website had not been updated due to technical problems.

Finally, in one establishment the mission team observed that a HACCP plan for old facilities had been used by the NFSA in the approval of new facilities.

#### **7.2.6 Planning of official controls**

When allocating the budget to the regional offices the head office may also give guidelines and set out special priorities for the activities on both regional and district level. The regional offices adjust the budgetary letter received from the head office to their regions and may also add regional or district priorities or guidelines before distributing it to the district offices. Representatives of one district office informed the mission team that the head office had indicated in the budgetary letter for 2007 that all fishery products establishments should be inspected or audited in 2007. All factory vessels should be inspected in the district in 2007 when possible at quayside.

One district office informed the mission team that the final budgetary letter is received early January every year. Each of the district offices gets a lump sum, the amount of which is adjusted to their activity. For 2007 one regional office had added to the guidelines from the head office that as many fishing vessels as possible should be inspected at the quayside

in 2007. Finally, within the funds allocated the district offices can add other priorities based on the local knowledge.

Representatives of one district office informed the mission team that, to a certain extent, the inspection activity was risk based. However, the procedures for the risk assessment had not been formalised.

In two of the districts visited the district officers aimed at visiting all fishery products establishments once every year; every second year by carrying out an unannounced inspection and every second year by carrying out an announced audit. However, in one of these districts this had not been possible to carry out since before the NFSA was established in 2004. Representatives from one district office informed the mission team that the lack of human resources in the district office had resulted in some establishments not being inspected at all during 2006 and some also not during 2005.

One of the previous competent authorities (the Norwegian Food Authority) established guidelines for carrying out risk based inspections of food processing establishments and inspections related to potable water. However, these were not used anymore in two of the districts visited. Moreover, neither the head office nor the regional office visited by the mission team had established any guidelines on risk assessment. In one of the districts visited the local inspectors when deciding on the inspection frequency included factors such as the time from the last visit to the establishment, type of products produced, the history of the establishment (such as insufficient implementation of corrective action and the quality of the HACCP system).

A national network for fish and seafood issues was established in 2006, with representatives from each of the NFSA's eight regions and the head office. The purpose of the network is to increase competence and harmonise the supervision related to fish and seafood. So far two meetings have been held, one in October 2006 and one in March 2007.

Currently the NFSA has a number of computer programmes and systems in use, the majority of which were developed by the former competent authorities. However, according to information included in the reply to the pre-mission questionnaire and additional information presented at the opening meeting, new computer programmes are in the process of being developed. The two most comprehensive are the Quality Management System (KIM = *kvalitetssystemet i Mattilsynet*) and the Operational Quality Management System (MATS = *tilsynssystemet i Mattilsynet*).

The development of these systems started more or less simultaneously with the establishment of the NFSA on 1 January 2004. It is anticipated that these systems will be fully operational as of June 2009.

### **7.2.7 Internal audits**

According to the reply to the pre-mission questionnaire, and in order to ensure that the different management systems have the desired effect, the NFSA has established a body responsible for internal audits. The Director General adopts the annual audit plan and appoints the audit teams. For 2007 three different teams have been put together. The team members come from various parts of the NFSA and leave their normal workplace for planning and carrying out the audits. The members of the audit teams are changed every year and necessary training is organised by the NFSA with external lecturers. Each audit is

scheduled for one week, in addition to the time for planning and preparation of audit reports.

The national audits comprise the whole organization, all levels will be visited and their activities will be reviewed. Reports addressed to the Director General are issued from all audits and the reports will be made publicly available on the NFSA's website. Non-compliances and discrepancies will be addressed to the responsible leader for initiation of corrective actions.

### **7.2.8 Carrying out of official controls**

In general the mission team observed that in most of the establishments visited the NFSA inspection reports/audit reports often did not contain as many deficiencies/non-compliances as the number observed by the mission team.

Furthermore, the mission team observed that inspections of vessels were not included in the inspection plan in one of the district offices visited. In 2007 only two inspections of vessels had been carried out, and since 2004 only seven out of 31 vessels had been inspected. Only one out of 12 factory vessels had been inspected since 2004.

In one of the establishments visited producing smoked salmon the mission team observed severe deficiencies in the performance of the official control. The mission team observed that in one case both the official samples of the products and the establishment's own samples of the products had tested positive for *Listeria spp.* The establishment did not inform the NFSA of the positive results, and when *Listeria spp.* were discovered in the official samples, the NFSA left the corrective action to the establishment, including the decision on whether to recall the products. The establishment concluded that the problem was minor, and since they were not able to define the batch, they decided not to recall the products. The NFSA did not consider any further investigation and did not follow up the corrective actions taken by the establishment.

In this establishments the mission team also observed severe deficiencies related to hygienic practices and cross contamination of final products. There were, *inter alia*, no separation between clean and contaminated parts of the facilities and both clean and unclean operations were taking place in a room where also final products were transported through. These observations had not been addressed by the NFSA.

In another establishment visited the mission team observed that, following a routine inspection in an establishment the district office issued an emergency decision banning placing on the market of fishery products considered not being fit for human consumption. However, the establishment could not document that the products had been handled according to the decision. Moreover, the NFSA had not verified that the establishment had complied with the decision.

In one establishment the mission team observed that the NFSA had carried out a revision in November 2006. The report was sent to the establishment two weeks after. The establishment's representatives themselves decided on a deadline (end of June 2007) for finalising the corrective actions. However, for one of the deficiencies the establishment did not respect the deadline. This had not been followed up by the NFSA. At the time of the visit by the mission team, the establishment had still not replied to the NFSA.

In another establishment the NFSA had carried out a revision in November 2005. A letter had been sent to the establishment from the NFSA in February 2006 regarding the follow up of the observation. However, at the time of the mission, 20 months after the revision, the establishment had still not responded to the letter from the NFSA. Further follow up had not been done by the NFSA.

Representatives of the district office informed the mission team that, due to the goal in this year's budget allocation letter to inspect all fishery products establishments and factory vessels during 2007, it had been difficult to follow up findings from previous official inspections.

In another district visited the inspectors only checked whether the main chapters of the HACCP plan were in place before approval. However, more detailed assessments were carried out during revisions.

In one establishment visited the mission team observed that the HACCP plan had been approved by the NFSA although not complying fully with the legal requirements related to histamine control. Specifically, it had been accepted that the HACCP plan described taking one sample from each batch to be analysed for histamine, instead of nine samples from each batch, as required in the legislation.

In one establishment visited both potable water from the municipal water supply and sea water were used. The mission team observed that, based on the results from samples of potable water only analysed for total microbiological activity using the total plate count method (TPC), the establishment had been approved by the NFSA in 2006. The UV treatment for the sea water had been approved by the NFSA in the autumn 2006. For the sea water supply one sample had been taken approximately six weeks before the visit by the mission team. However, the results were not available at the time of the visit. The local inspector had prepared a shortlist of parameters that sea water should be analysed for. Moreover, the establishment had been approved by the NFSA without having all necessary information about the microbiological quality of the water used. At the time of the mission no results for chemical parameters were available. Representatives of the district offices informed the mission team that for potable water they relied on the results of samples taken by the municipal waterworks themselves.

In one of the establishments visited the mission team observed that the NFSA during an inspection in October 2006 had revealed a number of deficiencies. In November 2006 the establishment had informed the NFSA of the corrective action taken. However, during an inspection in October 2007 the NFSA had observed the same or similar deficiencies. At the time of the visit the mission team observed that the deficiencies were still not corrected. In this establishment the mission team also observed that *drying of salted cod* took place on wooden racks. A representative from the establishment informed the mission team that this was a common practice many places in Norway.

### **7.2.9 Official sampling**

According to the reply to the pre-mission questionnaire the NFSA runs several monitoring programmes on an annual basis. In relation to the scope of this mission the feed control programme, the residue control programme and the programmes on heavy metals, contaminants and pollutants are relevant. In addition, in 2007 the NFSA organized a targeted monitoring programme on mercury in Greenland halibut. For 2008 special programmes are planned for heavy metals and other environmental contaminants in

Greenland halibuts, herring and mackerel. Official samples are analysed at laboratories recognized by the NFSA<sup>1</sup>.

Furthermore, it follows from the reply to the pre-mission questionnaire that official samples can be analysed for the following parameters; bacteriological (total plate count and *Listeria monocytogenes*), parasites (nematodes) and chemical (parameters that are relevant in relation to Council Directive 96/23/EC and Commission Regulation (EC) No 466/2001).

Finally, the results of the official sampling made in 2005 and 2006 are related to certain surveys and projects, such as “Dioxins and PCBs in fish oil and seal oil” (2005), “Dioxins and PCBs in fish” (2006), “Survey on heavy metals in seafood” (2005) and (2006), “Contaminants in processed seafood products” (2006), “Brominated flame retardants” (2006), “Residues, illegal and pollutive substances in fish” (2006), and “New pesticides in fish” (2006 and 2007 – preliminary report).

The NFSA has prepared guidelines regarding official sampling, which include principles regarding official sampling in relation to supervision of the production of fishery products. These guidelines are based on principles approved at the top management meeting in October 2004. According to these principles official samples shall, *inter alia*, be targeted and optimized and be collected in relation with official control of establishments’ own checks, in emergency situations or upon suspicion of the presence of agents that can affect human, animal or plant health. Representatives from the district offices visited informed the mission team that official samples should only be taken in case of suspicion or if the own-checks systems in the establishments were not in compliance with the legal requirements. Furthermore, the mission team observed in at least one of the districts visited that the district office did not follow up positive official samples, but rather relied on own check samples taken by the establishments.

At the opening meeting representatives of the NFSA could not, apart from referring to the monitoring programmes mentioned above, provide information on samples taken in order to comply with Chapter V of the Annex to Council Directive 91/493/EEC. However, the NFSA representatives claimed that such detailed information should be available at the different district offices.

In one of the districts visited no evidence of organoleptic checks, parasite checks or chemical checks were provided. Representatives of the district office confirmed that official samples related to control of fishery products establishments are not taken. The only official sample documented in this district was a sample which proved positive for *Listeria spp.*.

In one of the other districts visited the only official samples taken in 2007 up to the time of the mission were a few organoleptic checks made during landing. One representative of the district office informed the mission team that the number of samples would be decided at local level depending on budget available.

The mission team also observed that, when collecting samples to be checked for heavy metals, composite samples consisted of five fish.

---

<sup>1</sup> More detailed information about the laboratories are given in Chapter 7.4.1

## 7.3 Laboratories

### 7.3.1 General information

In the reply to the pre-mission questionnaire the NFSA informed that it has approved 18 private laboratories in addition to the following central public laboratories for analysing official samples:

- the National Institute of Nutrition and Seafood Research in Bergen;
- the National Veterinary Institute in Oslo;
- the Norwegian School of Veterinary Science in Oslo.

All the laboratories are accredited according to EN 17025. The contracts with the private laboratories expire end of 2007 and 15 December 2007 is the deadline for contracting laboratories for next year(s).

At the opening meeting representatives of the NFSA informed the mission team that a restructuring of the laboratories in Norway is ongoing. European laboratories are buying Norwegian laboratories (20 in 2007) with a possible consequence that some laboratories will be closed down. A possible centralisation of the laboratories in Norway might make it difficult to have some samples analysed, in particular those for bacteriological analyses.

### 7.3.2 Laboratories visited

During the mission two private laboratories were visited by the mission team. Both laboratories were contracted by the NFSA to perform official analysis; they also receive samples from private establishments for own-check analysis. The mission team observed that the two laboratories visited were both accredited for several parameters. One of the two laboratories was, however, for microbiology only accredited for *Salmonella spp.* and *Listeria spp.* in fresh fishery products. The laboratories were adequately equipped, and with motivated staff. The laboratories had participated in inter-laboratory proficiency tests, but none of the tests were conducted on fish as a matrix. The mission team observed that one of the laboratories had unfavourable results in an inter-laboratory test for *E. coli*. In addition, the method use was not accredited.

The representatives of the laboratories visited informed the mission team that the laboratories are not obliged to notify the NFSA in case of positive own check samples. However, according to the NFSA representatives the food producing establishments are obliged to inform the CA in case of positive samples.

## 7.4 Establishments visited

### 7.4.1 Own-checks system

#### 7.4.1.1 Pre-requisites

Most of the establishments visited during the mission had supply of potable water from municipal water treatment plants. However, some establishments had supply of potable water from private water treatment plants. The most common source for raw water in Norway is surface water, usually lakes.

In at least one of the establishments visited that received water from a private supplier, the only treatment of the water was initial filtration. The mission team also observed that the sampling frequency for checking the quality of the potable water in the establishments varied. However, samples were often taken once per month. Usually, these samples were checked for some general physical and microbiological parameters.

In one of the establishments visited the treatment of the private water supply was a 1 mm filter and UV treatment. Samples were taken from different taps in the production area four times per year. The mission team observed that internal procedures did not contain any information on action to be taken in case of contamination of the potable water with, for example, coliform or thermotolerant coliform bacteria.

NFSA representatives in one of the districts visited informed the mission team that a local monitoring campaign had revealed some problems with the quality of ice used in fishery processing establishments.

In the slaughterhouse slaughtering farmed salmon the mission team observed that the establishment controlled the quality of the ice by regularly taking samples for laboratory analyses. However, in some samples the results from the laboratory showed levels of total plate count above recommended limits.

This establishment also demonstrated microbiological control of the seawater, both before and after UV treatment. Some of the samples before treatment had high levels of micro-organisms revealed with the TPC method, and were positive for *E. coli* and coliform bacteria. However, after treatment all samples were in conformity with the requirements.

In two of the establishments visited the mission team checked the pest control programme. Both had contracted external companies to conduct the programmes. In one establishment six visits per year had been agreed, while in the other three visits per year had been agreed. To some extent the establishments themselves checked the traps between the contracted visits and they also contacted the pest companies in case of activity in the traps. The scope of the contracts appeared to be sufficient and the programmes were applied according to the contracts.

At least one of the establishments visited had procedures to register need for maintenance of facilities and equipment. In the registration form it had to be ticked off whether it was urgent or could wait until regular maintenance.

#### 7.4.1.2 HACCP plans

All the establishments visited during the mission had HACCP plans drawn up based on the principles described in Council Directive 91/493/EEC and Commission Decision 94/356/EC. In one of the establishments visited producing salted fish, the HACCP seemed adequate for the production and the final product.

However, in three of the establishments visited it was not evident that all possible hazards had been considered. Moreover, for hazards such as the temperature of filets before vacuum packaging, the temperature of the incoming fresh raw material or for histamine controls, sufficient risk assessments had not been carried out.

The mission team also observed that sampling for histamine was not carried out according to the legislation in force, since the number of samples taken from each batch was not correct. It was sometimes also difficult to confirm from the results given by the analysing laboratories that the number of samples effectively analysed corresponded to the number of samples received.

In one of the establishments visited producing smoked herring and mackerel, histamine was not included as a critical control point in the HACCP plan. Instead the establishment relied on a declaration from the supplier. According to the HACCP plan, the supplier should provide results from four samples per year. However, the mission team observed that for 2007 the result from only one sample was available while for 2006 the results from only two samples were available. Representatives of the establishment and the NFSA informed the mission team that because of favourable historical results, elevated levels of histamine was not considered a problem.

In another establishment visited the HACCP plan was inconsistent as the same issues had different limits/figures in different parts of the plan. Moreover, for the same production line the number of critical control points varied between different parts of the plan.

In several establishments the HACCP plans were not revised or up-dated in order to correspond to the actual quality checks, such as sampling for bacteriological contamination by *Listeria monocytogenes* and for histamine, carried out.

In one establishment corrective action was implemented after the limit associated to a critical control point was exceeded. However, the action taken could not be documented.

Finally, in one establishment visited the mission team observed that the HACCP plan had not been checked in detail by the NFSA. Moreover, the HACCP plan for this establishment had been used as the HACCP plan being part of the application for approval of the establishment's new facilities.

#### **7.4.2 Hygiene**

In most of the establishments visited the facilities and equipment were in a good state of repair. However, in one of the establishment visited producing dried cod, wooden racks were used for the drying.

The mission team observed in several establishments that the workers had to carry out several operations involving both packaging materials and handling of exposed products..

In one establishment the mission team observed that the doors to the room where the ingredients were kept and the room for mixing ingredients were kept open into the production area and into the packaging area. In the same establishment the room for storage of ingredients were untidy and both equipment etc. and unprotected ingredients were stored in the room.

The mission team observed that one establishment allowed temporary staff working on and handling fishery products without any medical certificate.

Finally, the mission team checked the procedures relating to medical certificates in one establishment. The necessary procedures were in place. However, it was observed that new staff started in production before the medical certificate had been issued. According to the manager of the establishment this was due to the fact that, although having contracted a doctor at a medical centre, the staff had to wait for several weeks for a consultation.

### **7.4.3 Premises and equipment**

In general, the establishments visited had working areas of a sufficient size. However, clean and contaminated parts of the facilities were not always kept separate and the layout could not preclude contamination of the products. In one establishment processing smoked salmon the mission team observed that due to the flow of products it could not be precluded that products at one stage of the production line could contaminate products at another stage on the line.

Most of the equipment in the establishments visited were in an acceptable state of repair and the cleanliness was acceptable. However, in several establishments the mission team observed that plastic curtains in the doors to the freezer rooms were often dirty and not well maintained. Ice was also often accumulating in the ceiling and on the walls around the doors to the freezer rooms.

Water was accumulating on the floor several places in the processing area in most of the establishments visited. In at least one establishment mezzanines were observed in the processing area. Some doors to the outside were damaged or not well maintained and some of them were also kept open although no activity was taking place.

### **7.4.4 Production**

In at least two establishments visited the mission team observed that fish fillets were kept on the production table or that fish was kept on the production line at room temperature during breaks.

The mission team observed reused wooden pallets in the production area in at least one of the establishments visited.

In one of the establishments visited it appeared that salt was reused.

### **7.4.5 Packaging, storage and transport**

In one of the establishments visited packaging materials with wrapping materials inside were piled on top of each other so that packaging materials in one box touched the wrapping material in the box below.

The mission team also observed that cod necks considered as by-product in one establishment, but intended for further processing in another establishment, were kept on ice in bloody, stagnant melt water.

In at least one of the establishments visited the mission team observed untidy and dusty facilities for storage of packaging materials and packaging materials not sufficiently protected from dust and contamination.

In one of the districts visited representatives of the NFSA informed the mission team that facilities for cleaning and disinfecting means of transport are to a limited extent considered when approving new establishments. Furthermore, officially approved facilities for cleaning and disinfecting means of transport do not exist in Norway. Finally, the mission team was informed that checks (i.e. in particular cleaning and temperature registration) of means of transport are normally not carried out.

In one establishment the mission team noted that packaging materials were stored in an open preliminary storage outside the establishment. The representatives of the district

office were not aware of this temporary storage and it was not included in the approval of the establishment.

### **7.5 Vessels visited**

During the mission three vessels were inspected, all at the quayside; one small fishing vessel (from the coastal fleet) inspected while unloading fish, one fresh fish trawler and one refrigerated seawater vessel (RSW).

The small fishing vessel was in a good state of repair and reasonably well maintained. The RSW was old but in an acceptable state of repair. Due to lack of the temperature recording device the vessel's representatives could not demonstrate that temperature in the holds was in compliance with the parameters indicated in Directive 92/48/EC.

The fresh fish trawler, also old, was in a poor state of repair and maintenance, in particular in the production area. In addition, wooden equipment was observed, other equipment was rusty and the walls were flaking paint. The aprons were very dirty and not stored hygienically outside working hours. Furthermore, the changing rooms were not adequate and the wooden holds for heading cod was poorly maintained.

### **7.6 Aquaculture farms visited**

The mission team visited two aquaculture farms producing salmon. The mission team observed in both farms well kept records including records on medication. In general, few medical treatments were recorded in both farms. In one of the farms the owner claimed that no antibiotics had been used since 1991. The salmon were treated for ectoparasites with medicated feed containing emamectin. Records kept on the farms showed that the withdrawal periods were respected.

The farms had contracts with a private practicing veterinarian specialised in fish diseases who visited the farms at least 8 times per year. Furthermore, the NFSA inspect the farms at least once a year. In October every year the farms send annual plans for next year's activity to the NFSA. These plans also contain information on sea lice treatments which will be carried out based on a coordinated approach. Monthly reports on fish mortality are also sent from the farms to the NFSA.

## **8 Final meeting**

A final meeting was held on 19 October at the head office of the NFSA in Oslo with representatives from the Ministry of Fisheries and Coastal Affairs, the Ministry of Health and Care Services and the NFSA. At this meeting, the mission team presented its main findings and some preliminary conclusions from the mission.

At the meeting the mission team also explained that, based on a more detailed assessment of the information received during the mission, additional conclusions could be included in the report.

The Norwegian representatives did not indicate any disagreement with the observations and the preliminary conclusions presented.

## 9 Conclusions

### 9.1 Competent Authority

#### 9.1.1 Implementation of EEA Acts

Compliance with Directive 91/493/EEC and in particular Article 18 could not be fully ensured since point II(3)(A)(b) of Chapter V of the Annex to Directive 91/493/EEC is not correctly implemented into relevant Norwegian law.

#### 9.1.2 Approval fishery products establishments

Facilities for cleaning and disinfecting means of transport were in general not available. This is not in compliance with point I(11) of Chapter III of the Annex to Council Directive 91/493/EEC.

#### 9.1.3 Enforcement

Compliance with Article 7 of Council Directive 91/493/EEC could not always be ensured as the NFSA had not taken the necessary measures in cases where its inspections had revealed that establishments were not complying with the requirements of the Directive.

#### 9.1.4 Training of personnel

The training given to the inspection staff could not always ensure that inspectors were allowed to assess the establishments' own-checks system. Full compliance with Article 7 of Commission Decision 94/356/EC on own health checks could therefore not be ensured.

#### 9.1.5 Official sampling

Compliance with Directive 91/493/EEC, and in particular Article 7 and points II(1), II(3)(a) and II(4) of Chapter V of the Annex thereto, could not be assured, since sampling and analyses were not included in the official inspections. Moreover, verification of such sampling by the establishments' representatives could not be documented. Furthermore, with regard to official sampling the NFSA had also not taken sufficient account of the conclusions of previous missions carried out by the Authority.

#### 9.1.6 Own checks including HACCP

Full compliance with Article 6 of Directive 91/493/EEC on own-checks and Decision 94/356/EEC on HACCP could not be fully ensured as the NFSA had not ensured that persons responsible for establishments had taken the necessary measures for the specifications in the Directive to be complied with at all stages of the production of fishery products and in particular in relation to the establishments' own checks.

### 9.2 Farms, vessels and establishments visited

#### 9.2.1 Conditions related to own-checks systems including HACCP

Deficiencies related to the own-checks systems and HACCP were observed in most of the establishments visited. For example, all possible hazards had not been considered, the plans were not updated and in accordance with the actual production taking place and corrective actions could not be documented. Compliance with Article 6 of Directive 91/493/EEC and with Commission Decision 94/356/EEC could therefore not be ensured.

#### 9.2.2 Conditions related to hygiene and production

Processing and handling of fishery products were not always carried out in such a way as to avoid contamination or spoilage. This is not in compliance with the requirements of, *inter alia*, points I, II, III and IV of Chapter IV of the Annex to Directive 91/493/EEC.

### 9.2.3 Conditions related to premises and equipment

There was not a clear separation between clean and contaminated parts of the facilities in some of the establishments visited. Some outer doors were not closing properly or not kept closed during processing. Wooden pallets were observed in the production area in at least one of the establishments visited. Maintenance was not sufficient for the RSW vessels visited. Compliance with the requirements in point I and II(A) of Chapter III of the Annex to Council Directive 91/493/EEC could therefore not always be ensured.

### 9.2.4 Conditions related to packaging, storage and transport

In most of the establishments visited packaging materials were not protected from dust and contamination during storage. This is not in compliance with the requirements of Chapter VI of the Annex to Council Directive 91/493/EEC.

Facilities for cleaning and disinfecting means of transport were in general not available where relevant. This is not in compliance with point I(11) of Chapter III of the Annex to Council Directive 91/493/EEC.

## 10 Recommendations to the Norwegian competent authority

### Notification of corrective action and a plan for completion of measures<sup>2</sup>

Norway should inform the Authority in its reply to the draft report, by way of written evidence, of the corrective actions taken and a plan for corrective measures and actions, including a timetable for completion of measures still outstanding, relevant to all the conclusions under Chapter 8 of this report. This information will be annexed to the final report. The Authority should also be kept informed of the completion of the measures included in the timetable.

---

<sup>2</sup> Due to heavy work load for the time being, NFSA will inform the Authority in its reply to the final report, by way of written evidence, of the corrective actions taken and a plan for corrective measures and actions, including a timetable for completion of measures still outstanding, relevant to Chapter 9 of this report.

## **Annex 1 List of abbreviations and terms used in the report**

Authority	EFTA Surveillance Authority
CA	Competent authority
EC	European Community
EEA	European Economic Area
EEA Agreement	Agreement on the European Economic Area
HACCP	Hazard Analysis and Critical Control Point
NFSA	Norwegian Food Safety Authority

## Annex 2 Other relevant legislation

The main EEA Acts regarding health conditions for the production and the placing on the market of fishery products and relevant for this mission are:

- a. The Act referred to at point 6.1.9 of Chapter I of Annex I to the EEA Agreement, *Council Directive 92/48/EEC of 16 June 1992 laying down the minimum hygiene rules applicable to fishery products caught on board certain vessels in accordance with Article 3(1)(a)(i) of Directive 91/493/EEC.*
- b. The Act referred to at point 7a of Chapter II of Annex XX to the EEA Agreement, *Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.*
- c. The Act referred to at point 6.2.13 of Chapter I of Annex I to the EEA Agreement, *Commission Decision 93/51/EEC of 15 December 1992 on the microbiological criteria applicable to the production of cooked crustaceans and molluscan shellfish.*
- d. The Act referred to at point 6.2.14 of Chapter I of Annex I to the EEA Agreement, *Commission Decision 94/140/EC of 19 January 1993 laying down the detailed rules relating to the visual inspection for the purpose of detecting parasites in fishery products.*
- e. The Act referred to at point 6.2.21 of Chapter I of Annex I to the EEA Agreement, *Commission Decision 94/356/EC of 20 May 1994 laying down the detailed rules for the application of Council Directive 91/493/EEC, as regards own health checks on fishery products.*
- f. The Act referred to at point 6.2.28 of Chapter I of Annex I to the EEA Agreement, *Commission Decision 95/149/EC of 8 March 1995 fixing the total volatile basic nitrogen (TVB-N) limit values for certain categories of fishery products and specifying the analysis methods to be used.*
- g. The Act referred to at point 18 of Chapter XII of Annex II of the EEA Agreement, *Directive 2000/13/EC of the European Parliament and of the Council of 20 March 2000 on the approximation of the laws of the Member States relating to the labelling, presentation and advertising of foodstuffs*, as amended and as adapted to the EEA Agreement by the sectoral adaptations referred to in Annex I to that Agreement.
- h. The Act referred to at point 54zb of Chapter XII of Annex II to the EEA Agreement, *European Parliament and Council Directive 95/2/EC of 20 February 1995 on food additives other than colours and sweeteners*, as amended.
- i. The Act referred to at point 54zn of Chapter XII of Annex II to the EEA Agreement, *Commission Regulation (EC) No 466/2001 of 8 March 2001 setting maximum levels for certain contaminants in foodstuffs*, as amended and as adapted to the EEA Agreement by the sectoral adaptations referred to in Annex I

to that Agreement.

- j. The Act referred to at point 54zn of Chapter XII of Annex II to the EEA Agreement, *Commission Regulation (EC) No 221/2002 of 6 February 2002 amending Regulation (EC) No 466/2001 setting maximum levels for certain contaminants in foodstuffs*.
- k. The Act referred to at point 54zn of Chapter XII of Annex II to the EEA Agreement, *Commission Regulation (EC) No 78/2005 of 19 January 2005 amending Regulation (EC) No 466/2001 as regards heavy metals*.
- l. The Act referred to at point 54zn of Chapter XII of Annex II to the EEA Agreement, *Council Regulation (EC) No 2375/2001 of 29 November 2001 amending Commission Regulation (EC) No 466/2001 setting maximum levels for certain contaminants in foodstuffs*.
- m. The Act referred to at point 54zj of Chapter XII of Annex II to the EEA Agreement, *Commission Directive 2001/22/EC of 8 March 2001 laying down the sampling methods and the methods of analysis for the official control of the levels of lead, cadmium, mercury and 3-MCPD in foodstuffs*, as amended.
- n. The Act referred to at point 54zxc of Chapter XII of Annex II to the EEA Agreement, *Commission Directive 2002/69/EC of 26 July 2002 laying down the sampling methods and the methods of analysis for the official control of dioxins and the determination of dioxin-like PCBs in foodstuffs*, as amended.

### Annex 3 Information on production and trade

The number of aquaculture farms, approved establishments, landing sites, auction markets, factory vessels, freezer vessels and listed fishing vessels registered by the CAs are included in figure 2. The Directorate of Fisheries is responsible for keeping lists of fishing vessels, while the NFSA is responsible for keeping lists of all other farms, vessels and establishments.

Figure 3 contains the production volume in tonnes of the main species in Norway in 2004, 2005 and 2006.

Figure 4 contains information on the total production in 2006 in tonnes and Norwegian Kroner (NOK) placed on the EU market and exported to third countries. In Figures 5 and 6 this information is split on the six main countries of destination within the European Economic Area (EEA) for each of the categories. The countries importing most products from Norway (in tonnes) in the different categories are highlighted.

Figure 7 contains information on the main countries exporting fishery products to Norway. The countries exporting most fishery products (in tonnes) are highlighted.

**Figure 2: Number of different aquaculture farms, vessels, landing sites, auction markets and establishments registered by the CAs**

Types	Number
<b>Aquaculture farms (2006)</b>	
Broodstock farms	26
Hatcheries	272
Ongrowing farms	921
<b>Vessels (2007)</b>	
Factory vessels	57
Freezer vessels	100
Fishing vessels	7 156
<b>Landing sites (2007)</b>	512 <sup>3</sup>
<b>Auction markets (2007)</b>	none
<b>Establishments (2007)</b>	984

<sup>3</sup> The total number of landing sites corresponds to the number of establishments with production code 01. Production code 01 is given to establishments approved for packing of fresh fish.

**Figure 3: Total production in tonnes for the years 2004 to 2006 with breakdown by main products<sup>4</sup>**

Categories	2004	2005	2006
<b>Catch fisheries</b>			
Pelagic fisheries	1 849 915	1 718 525	1 535 465
Groundfish fisheries	607 516	616 995	662 270
Shrimps/crustaceans	66 577	56 412	48 198
<b>Total catch fisheries</b>	<b>2 524 008</b>	<b>2 391 932</b>	<b>2 245 933</b>
<b>Aquaculture</b>			
Aquaculture shellfish/molluscs	3 817	4 904	3 704
Aquaculture fish	633 039	656 908	705 042
<b>Total aquaculture</b>	<b>636 856</b>	<b>661 812</b>	<b>708 746</b>
<b>Total</b>	<b>3 160 944</b>	<b>3 053 744</b>	<b>2 954 679</b>

**Figure 4: Production in 2006 exported to the EU and to third countries in tonnes and Norwegian Kroner/Norske Kroner (NOK)**

Species	Tonnes			1000 NOK		
	EU	Others	Total	EU	Others	Total
<b>Salmon/trout</b>	389 664	163 431	553 096	13 074 935	5 409 617	18 484 552
<b>Whitefish</b>	135 131	98 006	233 137	3 764 211	1 418 736	5 182 946
<b>Conventional (cured)</b>	59 175	58 340	117 515	2 962 674	1 884 402	4 847 076
<b>Pelagic</b>	287 718	484 945	772 663	1 876 889	3 548 308	5 425 197
<b>Shrimps/crustaceans</b>	20 670	14 724	35 394	761 166	232 210	993 375
<b>Other</b>	144 103	12 717	156 820	344 057	208 950	553 007
<b>Total</b>	<b>1 036 461</b>	<b>832 164</b>	<b>1 868 625</b>	<b>22 783 932</b>	<b>12 702 222</b>	<b>35 486 154</b>

**Figure 5: Production placed on the EEA market with a breakdown by main products and main importing EEA countries**

	Conventional		Whitefish		Pelagic	
	Tonnes	1000 NOK	Tonnes	1000 NOK	Tonnes	1000 NOK
<b>Denmark</b>			30 854	775 857	91 872	380 943
<b>France</b>	2 550	101 092	15 996	660 404		
<b>Germany</b>			7 925	182 015	22 929	170 149
<b>Greece</b>	3 107	117 166				
<b>Italy</b>	9 635	735 577				
<b>Lithuania</b>					13 249	73 412
<b>Netherlands</b>	1 182	37 775	10 203	202 244	27 012	226 055
<b>Poland</b>					40 990	335 520
<b>Portugal</b>	31 604	1 531 501				
<b>Spain</b>	6 755	262 410				
<b>Sweden</b>			8 608	284 041		
<b>United Kingdom</b>			26 932	932 732	42 752	296 888

<sup>4</sup> The figures represent wet/live weight for catch fisheries and round weight for aquaculture products. The figures for 2006 are preliminary.

**Figure 6: Production placed on the EEA market with a breakdown by main products and main importing EEA countries**

	Salmon/trout		Shrimps/crustaceans		Other	
	Tonnes	1000 NOK	Tonnes	1000 NOK	Tonnes	1000 NOK
<b>Denmark</b>	63 969	2 014 879	2 921	95 029	115 346	170 485
<b>Finland</b>			2 030	74 829	19 187	36 907
<b>France</b>	84 862	2 948 349	1 982	58 235		
<b>Germany</b>	24 030	908 076				
<b>Ireland</b>					2 387	2 636
<b>Netherlands</b>			697	13 262	551	16 477
<b>Poland</b>	41 401	1 326 063				
<b>Spain</b>	30 549	1 003 244				
<b>Sweden</b>			7 675	295 799	3 918	64 317
<b>United Kingdom</b>	38 346	1 280 734	3 911	153 151	1 551	21 536

**Figure 7: Import of fishery products from main exporting EEA countries and main third countries for the years 2004 to 2006**

	2004		2005		2006	
	Tonnes	1000 NOK	Tonnes	1000 NOK	Tonnes	1000 NOK
<b>EEA countries</b>						
Denmark	147 450	1 006 518	136 169	1 026 167	152 268	1 273 827
Germany	31 704	191 603	82 673	468 419	79 270	577 995
Iceland	88 943	486 028	69 092	372 891	74 798	580 906
Netherlands	13 782	157 318	33 324	183 839	34 030	256 758
United Kingdom	69 160	427 453	40 187	313 849	39 811	311 914
<b>Third countries</b>						
Chile	12 073	67 766	16 247	86 353	7 082	56 245
Faroe Islands	49 851	251 178	21 737	149 796	39 290	277 562
Kina	1 213	28 347	1 706	54 315	3 260	98 627
Morocco	25 991	118 029	17 919	79 932	17 752	84 598
Peru	31 697	139 509	21 923	103 411	27 706	181 286
Russia	48 491	566 851	28 726	526 756	27 873	596 410
Thailand	2 338	51 272	3 168	74 746	3 192	103 841
United States	19 036	273 207	16 946	278 860	23 947	349 036