ANNUAL REPORT
2016
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A YEAR THAT GIVES REASON TO SMILE

I am proud to say that the Norwegian Food Safety Authority delivered good results in relation to our effect goals during our first full year of operation with the new organisation structure.

Food and drinking water in Norway are safe. Few people become ill as a result of ingesting food or water. We rarely uncover hygiene conditions that represent a threat to food safety. Plant and animal health is also good, and Norway is one of the best countries in the world in these areas.

The situation is not entirely rosy, however, and we are not protected from events in the rest of the world. Last year, a new serious disease that affects animals from the deer family was detected in Norway—chronic wasting disease. So far, 10,000 samples have been collected and only five animals have tested positive. The extensive work to map the disease was carried out in good cooperation with the Norwegian Veterinary Institute, the Norwegian Institute for Nature Research (NINA), the Norwegian Environment Agency, the Norwegian Nature Inspectorate (SNO) and many voluntary organisations, among other parties. The goal of this effort is to limit the spread of and preferably eradicate the disease.

Although most animals are well cared for, too many die while grazing on outlying land. Animal tragedies happen, and each case is one too many. Animal welfare is therefore one of our most important tasks.

The aquaculture industry has serious disease and welfare problems. It is a positive development that the industry uses less delousing agents, but at the same time, many fish are injured by mechanical delousing methods. This situation cannot continue. Making the players improve the health and welfare situation is also high on our list of priorities.

The distribution networks for drinking water need extensive upgrading, and this entails a risk of the water becoming contaminated. The food safety situation could deteriorate because more of the food we eat is imported. Food crime is widespread in many countries and could affect Norwegian consumers. Animal and plant health is under pressure from increased imports and more people travelling with their pets.

Maintaining the current good status and resolving challenges depend on the efforts of business and industry, animal owners and our organisation. We are a watchdog for consumers and animals and a ‘guide dog’ for animal owners, business and industry.

The smiley scheme in focus

Our primary focus last year was the smiley scheme. Up-to-date information about the results of inspections of enterprises in the food and beverage service industry is now easily available to consumers all over Norway. A total of 11,000 inspections were carried out at 7,500 enterprises. We achieved this by rationalising inspections and introducing new technology. We now complete our inspection on site and publish the result immediately at the website matportalen.no and by means of posters on the door. Deficiencies are now remedied sooner and the hygiene situation has improved. The smiley inspection scheme has been demanding as well as rewarding, and we have gained experience that will benefit us in other areas.

An organisation developing in the right direction

The year 2016 was our first full year of operations since the restructuring of the organisation. The results are more supervisory activities and more time spent on supervisory visits. We also spent more time on communication and guidance, and we are helping more people through our
online services. In addition, we have been very active in our regulatory work. In our international work we have given priority to issues that are important to Norwegian players and consumers and that we can influence. Fish health and antibiotic resistance were two of these areas. I would like to thank my committed and capable employees for their hard work.

**Big challenges, but also many possibilities**

Increased use of the sea as a source of food and other products, more international trade in food and the sharing economy will make their mark on the future and bring new challenges. Digitalisation will allow both business and industry and our organisation to resolve these challenges in a more efficient manner.

As an important premise setter for food policy implementation, the Norwegian Food Safety Authority is at the point of intersection between sustainable production and food safety. We are tasked with ensuring food safety and good animal health and welfare, but must do so without preventing crucial development.

The population's confidence in us is strong. We came second in this year’s annual reputation survey of public agencies. This result makes us feel proud and humble, and inspires us to continued efforts to ensure that we have a society where food is safe and animal welfare safeguarded.

Oslo, 15 Mars 2017

*Harald Gjein*

Director General

The Norwegian Food Safety Authority
The Norwegian Food Safety Authority (NFSA) is the Norwegian state’s supervisory authority for plants, fish, animals and foodstuffs. Our social mission extends from the field and fjord to the table. This means that we have an impact on everybody’s everyday lives.

We work to:

- Ensure safe food and drinking water
- Promote healthy plants, fish and animals
- Promote animal welfare and respect for animals and fish
- Promote health, quality and consumer interests
- Ensure environmentally friendly production

We shall address considerations for players throughout the entire food chain, including market access abroad. Considerations of safe food and drinking water always take precedence in our activities. We also work to achieve the goals set out in other legislation that we are charged with administrating.

We carry out our duties within a framework defined by the Norwegian parliament, the Storting, and our three owners: the Ministry of Agriculture and Food, the Ministry of Health and Care Services, and the Ministry of Trade, Industry and Fisheries. The NFSA is a government administrative agency.

For our users – food producers and animal owners – we make clear and comprehensible regulations that are easy to comply with. We provide guidance and ensure equal terms and access to markets all over the world. The players are free to find the best solutions within the limits set by the regulatory framework.

For animals and farmed fish, we follow up their owners to ensure that they keep the animals healthy and well cared for.

For the consumers, we follow up the producers to ensure that consumers receive safe products and that producers address consumer considerations. We provide credible and comprehensible information so that consumers can make informed choices.

'Vision: A society where food is safe and animal welfare safeguarded'
For the Norwegian state and our expert departments, we help to implement food policy and maintain confidence in Norwegian food administration and production.

As a contingency organisation we are always ready to deal with undesirable incidents within our broad administrative area.

**Presence all over Norway**

The organisation has two administrative levels – the head office and five regions. Proximity to enterprises and local knowledge are important to our official control work. That is why we have offices all over the country to carry out this work.

The head office attends to the role of directorate, appeal case processing and regulatory work as well as the international work. The head office has six different office locations.

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**Key figures**

The key figures are assessed in Chapter 3 – Activities and results.

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of controls</td>
<td>71 071</td>
<td>68 133</td>
<td>72 889</td>
</tr>
<tr>
<td>Average number of full-time equivalents(^1)</td>
<td>1 281</td>
<td>1 251</td>
<td>1 255</td>
</tr>
<tr>
<td>Total allocation and debit authorisations received, item 01–99</td>
<td>1 263 085 000</td>
<td>1 281 053 837</td>
<td>1 271 498 000</td>
</tr>
<tr>
<td>Degree of utilisation items 01–29(^2)</td>
<td>98%</td>
<td>94%</td>
<td>95%</td>
</tr>
<tr>
<td>Operating expenses(^3)</td>
<td>1 225 442 887</td>
<td>1 182 955 962</td>
<td>1 221 179 149</td>
</tr>
<tr>
<td>Payroll percentage of operating expenses</td>
<td>62%</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>Payroll expenses per full-time equivalent</td>
<td>596 263</td>
<td>612 205</td>
<td>632 384</td>
</tr>
</tbody>
</table>

\(^1\) The figures show the number of positions (permanent, substitute and temporary employees) converted to full-time positions, and include employees on paid leave of absence. The figures for 2015 and 2016 are an average of several counts made at different times, while the figure for 2014 shows the status at year-end. The figure for 2014 is thus not directly comparable with the figures for 2015 and 2016.

\(^2\) Accounting figures from the reporting of general ledger accounts have been used for key figures for operating expenses and payroll expenses.
3 ACTIVITIES AND RESULTS

In this chapter, we will first present an overall assessment of results, goal achievement and resource use. We will then discuss each effect goal as regards status, goal achievement and strategic measures and priorities. Under each effect goal, we have prepared thematic chapters on the most important areas. Each of the thematic chapters consist of four parts: goals, results, challenges and plans. Appendix 2 contains figures for all the effect indicators. We have prepared a separate chapter on work methods and measures in which we point out the most important circumstances relating to our core activities. The chapter concludes with an assessment of our resource use and productivity.

OVERALL ASSESSMENT OF ACTIVITIES AND RESULTS

We consider the overall goal achievement to be good. The food and drinking water status is good, while there are particular challenges in the areas of fish welfare and fish health. The new organisation is functioning well, but we see a need for adjustments.

<table>
<thead>
<tr>
<th>Effect goal</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure safe food and safe drinking water</td>
<td>Satisfactory</td>
<td>Food safety is good. There are not many dangerous bacteria in our food, and few cases of foodborne illness. The situation in terms of infective agents is one of the best in Europe. Increased import and food crime are challenges to this good status. More than 90% of the population are connected to waterworks that provide safe water. However, the condition of much of the Norwegian distribution network is unsatisfactory, and this represents a risk of the water becoming contaminated.</td>
</tr>
<tr>
<td>Promote healthy plants, land animals and fish</td>
<td>Satisfactory</td>
<td>Plant and animal health is good. Growing imports represent an increased risk of new diseases being introduced. The fish health situation remains a cause for concern. The aquaculture industry continues to struggle with salmon lice problems, disease, high mortality rates and inadequate contingency capacity. These problems prevent achievement of the goal of growth in the industry.</td>
</tr>
<tr>
<td>Promote animal welfare and respect for animals and fish</td>
<td>Satisfactory</td>
<td>Most animals are well cared for, and we see positive developments in several areas. However, it is still a serious situation that too many animals die while grazing on outlying land. The fish welfare situation remains a cause for concern. New methods entail a lot of handling, injuries and mortality. One in five fish die during production.</td>
</tr>
<tr>
<td>Promote health, quality and consumer interests</td>
<td>Not fully satisfactory</td>
<td>Food is not always adequately labelled when sold. Correct labelling is particularly important for people with allergies. Some of the white fish is of unsatisfactory quality, which results in inadequate resource utilisation and consumers not always receiving the quality that they deserve. Food crime is a growing challenge.</td>
</tr>
</tbody>
</table>
Ensure environmentally friendly production: Not fully satisfactory. The use of salmon delousing agents and pesticides has an impact on the environment. It is a challenge to reconcile the industries’ need for pesticides and pharmaceuticals with the goal of using as little of them as possible. Utilising trimmings from food production requires knowledge and control to maintain food safety.

We carried out 72,889 supervisory activities. This includes inspections, audits, sample collection, document control in connection with import and export, and dealing with unexpected events. This represents an increase of about 7% compared with the preceding year. The main reason for this increase is the introduction of the smiley inspection scheme for enterprises in the food and beverage service industry, which accounts for 11,000 inspections. Smiley inspections of enterprises in the food and beverage service industry were introduced in order to enable consumers to make more informed choices, improve hygiene in the industry and make inspections more efficient by concluding the work on site. Our experience so far is that we have achieved all three goals.

Food in Norway is safe and, with a small number of exceptions, land animal welfare is safeguarded. Our work to ensure food safety and animal welfare is based on strict requirements throughout the food chain, which means that we nevertheless find violations of the regulations. We found regulatory violations in 48% of the enterprises that were subjected to supervisory activities. This is a decrease of 4% compared with the previous year.

Experience from incidents and exercises shows that our emergency preparedness is good. We have been making determined efforts to strengthen it while also handling several different incidents in a good manner.

We have followed the regulatory work in the EU closely, and the implementation of EEA regulations has been satisfactory.

Two areas have been given particular priority in the work to digitalise services. We publish the results from smiley inspections at matportalen.no immediately. In addition, we send letters from the NFSA digitally.

Sickness absence was 5.8%, which is a slight decrease. We are not satisfied with the situation, however, and work both to prevent sickness absence and to follow up employees on sick leave to help them to return to work as soon as possible.

In order to realise the NFSA’s strategy, a higher proportion of our resources shall be used for core activities. By core activities is meant work directly related to regulatory development, supervision, communication/guidance and knowledge collection/analysis. We spent 57.3% of the time at our disposal on core activities compared with 57.7% in 2015. This reflects that we have invested a lot of time and effort in developing and improving the organisation. We intensified our work to develop a more uniform control regime and gave priority to developing competence, leadership and employeeship.

Generally speaking, management and control of our activities are good. We make active use of our strategy in management work, and decisions are to a greater extent based on documented knowledge. However, we need to further develop internal control and improvement work. We are well under way in facilitating new office solutions in order to promote more cooperation and sharing of competence. Thirty processes have been carried out relating to new tenancy contracts all over Norway.
FOOD AND DRINKING WATER

Norway has safer food and drinking water than most other countries in the world. Long-term preventive work and low occurrence of most infective agents in Norwegian livestock and food produced in Norway are two important reasons for this good status.

Brief description of the current situation

The NFSA is charged with ensuring safe food and drinking water. Norwegian food and drinking water are among the safest in Europe. There are few cases of illness caused by food and water, and our supervisory activities rarely detect conditions that threaten food safety.

This good status is facing challenges, however. Many parts of the water distribution network are old and fragile, and increasing the pace at which old water pipes are replaced is an urgent matter. Increased import of food from all corners of the world increases the risk of importing infective agents and makes it more demanding for the industry to ensure good traceability and prevent food crime.

All foods contain different chemical substances, but we need to know more about them in order to identify any hazards that could have detrimental effects on health in the long term. Large investments have gone into and there are great expectations concerning the introduction of new marine products such as seaweeds, but we do not know enough about the food safety aspects of such products yet.

Effect indicators and overall assessment of goal achievement

<table>
<thead>
<tr>
<th>Effect indicator</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and proportion of examined samples that contained illegal levels of contaminants (such as pesticide residues, dioxins, PCBs and pharmaceutical residues)</td>
<td>Satisfactory</td>
<td>Monitoring of pesticide residues, contaminants and pharmaceutical residues in food generally shows few instances where applicable limit values are exceeded, but somewhat more findings of pesticide residues. We are monitoring developments and will assess our findings in relation to the results from the EU countries.</td>
</tr>
<tr>
<td>Number of reported shipments that have caused food allergies/intolerance due to reactions to undeclared allergens</td>
<td>Satisfactory</td>
<td>The National Register of Severe Allergic Reactions to Food received 135 reports from doctors about severe allergic reactions compared with 159 reports in 2015. Two food samples were analysed, and no undeclared allergens were detected.</td>
</tr>
<tr>
<td>Number of registered cases of illness following infection with Salmonella, Campylobacter, Yersinia, Shigella, Listeria, EHEC (Norwegian Surveillance System for Communicable Diseases)</td>
<td>Satisfactory</td>
<td>As in previous years, the Norwegian Institute of Public Health’s monitoring has registered few cases of illness. This is a low level in a European context.</td>
</tr>
<tr>
<td>Number of notifications sent of health hazards detected in food and feed on the Norwegian market (RASFF)</td>
<td>Satisfactory</td>
<td>Norway sent 68 notifications via the European Rapid Alert System for Food and Feed (RASFF), of which 18 concerned food supplements and 13 concerned pesticide residues. This is a doubling compared with 2015, but that year did have the lowest number of notifications since 2010.</td>
</tr>
<tr>
<td>Percentage of the Norwegian population connected to waterworks with satisfactory</td>
<td>Satisfactory</td>
<td>More than 90% of people connected to water supply systems that are subject to approval receive water of high microbiological quality. We don’t</td>
</tr>
</tbody>
</table>
Goal achievement is good, and this is due to the relatively low occurrence of most infective agents in Norwegian livestock and food produced in Norway. This situation is a result of many years of preventive work. One example of a successful measure to maintain Norway’s good status is the work to prevent *Campylobacter* infection. The main challenge facing both the industry and the NFSA is to maintain the same high level of food safety in future.

Although most people have a safe drinking water supply, the waterworks owners do not do enough to ensure sufficient quantities and good water quality. Municipalities etc. must prioritise the long-term challenges such as distribution network maintenance and sufficient security of supply to ensure sufficient quantities of safe water.

The food safety effect indicators show that the situation is good, but they do not provide a sufficiently accurate overall picture of potential hazards. We need a more systematic overview of undesirable substances in food than the current effect indicators provide. In the area of drinking water, the current effect indicators fail to adequately reflect long-term challenges such as the maintenance backlog in the distribution network and special challenges facing small waterworks. The increasing complexity of the food chain requires a high level of expertise and good risk management systems in enterprises, and it makes it demanding to ensure good traceability and prevent food crime. In combination with new forms of food sale, this means that we have to develop our official control regime and prioritise dealing with these new challenges.

Although we generally find seafood to be safe, hygiene problems remain in parts of the white fish sector. Increasing the level of supervisory activity has not had the desired effect. The use of new marine resources such as seaweeds for food and feed is a challenge since we do not know enough about the food safety aspects and have not developed supervisory activities in this area.

Online shopping is growing both in the diet industry and in the cosmetics industry, marketing is becoming more aggressive, and the innovation rate is high. Matter-of-fact information about food and health is becoming increasingly difficult to find in the abundance of blogs and other information about food. It is becoming more difficult for consumers to make informed choices.

**Strategic measures and priorities**

We are following up the waterworks owners’ work with both short-term and long-term measures. The new Drinking Water Regulations will be an important tool in the follow-up work.

We continue our efforts to prevent pathogenic bacteria from reaching consumers, among other things by continuing the action plan to combat *Campylobacter*.

We also continue our work to rationalise our supervision and develop new forms of supervisory activities, and we will use the experience gained from the smiley inspection scheme in this work.

We will assess the risk of food crime, and the risk assessment will form the basis for initiatives in the years ahead.

We continue the work to obtain more knowledge about the occurrence of chemical substances in seafood and other foods. Awareness of chemical hazards will become more prominent in our day-to-day supervisory activities.

Knowledge collection and development of the administrative regime for new marine products and species continue, with an emphasis on seaweeds.

In the white fish sector we will follow up the enterprises that have the biggest problems by escalating the use of measures.
HYGIENE

Compared with other countries, there are fewer dangerous bacteria in food in Norway. The most important contribution the NFSA and the enterprises can make to ensure that this remains the case is to continue their preventive work.

Goals

People shall not be food poisoned or exposed to infection through food or drink.

- Food production enterprises shall maintain good management of their production.
- Consumers shall not become ill from pathogenic bacteria found in raw materials, such as *Campylobacter*.

Results

According to figures from the Norwegian Institute of Public Health, between 5,000 and 7,000 cases of food-borne or water-borne infection (‘food poisoning’) are registered every year. The registered cases are probably just the top of the iceberg, since many who become food poisoned do not see a doctor - and they usually don’t need one. Although we have no accurate figures showing how many suffer food-borne or water-borne infections, the figures are low and, moreover, notifications submitted to the Surveillance System for Communicable Diseases (MSIS) and the reporting system Vesuv show that many of the registered cases were infected while travelling abroad.

Monitoring and investigation show that we still have one of the lowest rates of infection transfer from foods and animals in Europe. This is because most infective agents are rarely found in Norwegian livestock and foods produced in Norway.

Our supervisory activities also show that most food producers and enterprises in the food and beverage service industry practise good hygiene. We rarely find such serious conditions that we have to impose a sales ban for food or close an enterprise due to food safety risks.

‘Norwegian food is among the safest in Europe.’

![Figure 3 Number of the most common food-borne infections contracted in Norway (Source: MSIS, the Norwegian Institute of Public Health). *The figures for 2016 have not yet been broken down by foreign/domestic infection.](image-url)
As the table shows, the number of Campylobacter and E. coli EHEC cases has increased, but remains low. These variations could just as well be due to coincidence, improved diagnostic work and greater attention to outbreaks.

**Action plan to combat Campylobacter prevents infection**

The food-borne bacterium that most often causes illness in people is *Campylobacter*, and the most common sources of infection are undisinfectected drinking water, eating or preparing raw chicken, and frequent contact with animals. In order to prevent this, we have a voluntary but nonetheless binding national action plan to combat *Campylobacter* in broiler chickens. Between May and October, which is when the bacterium is most prevalent, all poultry flocks are tested before slaughter so that only the bacteria-free chickens are placed on the market fresh. The others are frozen or heated to kill the bacterium.

*Campylobacter* is a big problem in many European countries, and the ESA visited us to study our preventive measures for poultry. They also saw how the action plan has a positive effect on public health in Norway, even though broiler chicken is only one of several known sources of infection.

There was an increase in the number of broiler chicken flocks where *Campylobacter* was found, but we have yet to determine why. Figures from the Norwegian Institute of Public Health show no increase in the number of patients infected. This shows that the action plan is preventing the infection from reaching consumers.

**Shortcomings in cleaning and maintenance of premises**

Our supervisory activities in relation to food producers are particularly aimed at hygienic and building-related conditions that are important to food safety. Experience from supervision of enterprises in the meat, dairy, bakery and pastry industries shows that the level of knowledge varies from big producers who are at the forefront of new technology to the small ones with varying levels of knowledge and resources. Many do not quite meet the requirements for cleaning and maintenance of their premises. In our supervisory activities, we emphasise that it is the enterprises themselves that must improve procedures in order to identify and deal with hazards that could threaten food safety.

The local food industry is growing. Most producers of local food have good procedures in place, but many make products of animal origin that could become a health hazard if the production is not adequately managed.

**Challenges**

We eat more fruit, berries and vegetables all year round from all over the world. Most of these products are grown outdoors where they can be contaminated by water, soil, animals and people. Since we often eat them without heating them first, infective agents on their surface could make us ill. The risk is particularly high for fruit, berries and vegetables produced in warm countries with a shortage of clean water for irrigation. The use of impure water when applying pesticides is also a source of contamination. This makes it particularly important for business and industry to have functioning mapping and risk management systems in place. Due to this risk, we carried out a two-year monitoring programme for imported fresh and frozen berries. The results were good, with few findings of infective agents. This indicates that there are good procedures in place to address hygiene considerations in connection with the import of berries.

Since we know that imported foods of plant origin represent a particular risk, continuous follow-up of importers and knowledge about the status as regards infective agents in such products remain necessary.

**Plans**

We will continue work on the action plan to combat *Campylobacter* in order to prevent the infection from reaching consumers.
We will carry out a control campaign targeting hygiene in connection with the slaughtering of poultry in which we will look at *Campylobacter* as well as other hygiene factors.

We will continue our monitoring and control of imported food of plant origin and will start a new three-year monitoring programme for salads and fresh herbs.

**CHEMICAL SUBSTANCES IN FOOD**

*We have many analyses conducted of different chemical substances in food every year. The results uncover few cases of excessive levels of undesirable substances – particularly in products made in Norway. We are monitoring an increasing number of substances, but we still do not have a complete overview of the risks associated with chemical substances in food.*

**Goals**

Food shall not contain chemical substances in quantities hazardous to health.

- We will increase knowledge about the occurrence of chemical substances in food through monitoring programmes and effective supervisory activities.
- The regulations shall become easier to understand and comply with and carry out supervisory activities pursuant to.
- Consumers shall be aware of the risk involved in buying food supplements online.

**Results**

Every year we carry out monitoring programmes for pesticide residues, contaminants and pharmaceutical residues in food.

There were findings in excess of the limit values for pesticide residues in about twice as many samples of imported foods as the year before (see the table below). We have followed up these findings in relation to the enterprises. We do not yet know the reason for the increase, but we are monitoring developments and will assess our results in relation to the results from the EU countries.

We also carried out new analysis programmes for polycyclic aromatic hydrocarbons (PAHs) in traditionally smoked foods, perchlorate and chlorate in food of plant origin and transfer of siloxane to food from food contact materials from silicone products. The results will be ready in 2017.

| Table 2 Percentage of samples tested containing too much pesticide residues – exceeding limit values |
|-------------------------------|-----------|-----------|-----------|
| **Domestic**                  |           |           |           |
| Number of samples             | 526       | 459       | 423       |
| % of samples that exceed the limits | 0.2   | 0.2       | 0.5       |
| **Imports**                   |           |           |           |
| Number of samples             | 864       | 846       | 905       |
| % of samples that exceed the limits | 2.5   | 2.2       | 4.8       |

Monitoring otherwise shows few instances of findings of contaminants and pharmaceutical residues in excess of limit values in foodstuffs of animal origin. We found elevated cadmium levels in some samples of game liver. There is no limit value for cadmium in offal from wild animals, but the findings do exceed the limit values for cattle offal. We will therefore commission a risk assessment of eating liver with the levels that we found.

We started at multi-year monitoring programme for radioactivity in food that will provide a systematic mapping of the level of radioactive caesium (Cs 137) in different foodstuffs. The first
results show that levels were well below the limit values in local food products, with the exception of one dairy product. Relatively high levels were found in some samples of heather honey – even from areas that did not receive the highest levels of nuclear fallout. This confirms that radioactive contamination is a long-term problem and that levels may still be high in products from outlying land.

A risk assessment from the Norwegian Scientific Committee for Food Safety (VKM) for inorganic arsenic showed that eating rice cakes could result in an added health risk for small children. We therefore published a warning against giving rice cakes to small children and upheld our warning against giving small children rice drinks.

We earmarked one of our monitoring programmes to monitor food supplements and other products targeting athletes. This was done in cooperation with Anti-Doping Norway. The programme checked 148 products, and analyses detected illegal pharmaceutical substances or anabolic steroids in 19 of the products purchased from various online shops. We followed up those registered in Norway. A similar analysis project will be conducted in 2017.

Many fail to document the safety of food contact materials

A joint Nordic control project on materials and objects that come into contact with food (food contact materials) has previously shown a lack of knowledge among importers, producers and users of food contact materials. We therefore increased our supervisory activities to 813, compared with 139 in 2015 and 210 in 2014, respectively. The result shows inadequate documentation of the safety of food contact materials. We found inadequate documentation in one third of our supervisory activities.

Since the regulations concerning foodstuffs for particular nutritional uses have changed so that many products are now considered ‘ordinary food’, we have processed more applications for permits to add vitamins, minerals and amino acids.

Challenges

We still do not have a complete overview of the risks associated with chemical substances in food. We need tools and methods to obtain and use knowledge to prioritise the right measures to reduce exposure to substances that are hazardous to health. A lot of new knowledge is being produced, and it will take time to gain a full overview of it. Moreover, a lot of the research in this field takes place abroad, and we have to consider how relevant it is to Norwegian conditions. There is also a lot of uncertainty about the potential health effects of chemical substances in food.

Many enterprises lack knowledge of the risk associated with chemical substances in food. They are also unaware of their responsibility to ensure that the food they produce or sell does not contain chemical substances in quantities that could make it hazardous to health.

The regulatory framework for chemical substances in food is complex and in constant development. This makes it difficult to understand and comply with the regulations, and difficult for us to carry out supervisory activities pursuant to them.

There is growing demand in Norway for food supplements and foods with added vitamins, minerals and/or ‘other substances’. Many operate in a grey area in their marketing as well as in relation to pharmaceuticals. The trade in such products is difficult to trace, and a lot of them are sold online or via fitness centres, hairdressers, beauty salons and various practitioners of complementary and alternative medicine. This makes follow-up and keeping an overview difficult. In addition, those operating via these channels often have insufficient knowledge of the hazards and the applicable regulations. Our investigation of food supplements identified serious findings, and resulted in 18 notifications submitted to the European notification system RASFF, among other things. We also received nine reports about serious side effects of food supplements from RELIS (Regional Medicines Information Centres).
Plans
In order to further increase our knowledge, we will commission an assessment from the Norwegian Scientific Committee for Food Safety (VKM) concerning which substances it is important to obtain further knowledge about based on the potential risk they could represent in the Norwegian diet. The assessment will give us a better basis for planning and prioritisation of monitoring and control programmes and, if relevant, commissioning new risk assessments.

We will continue our work to develop and simplify regulations. Specifically, we will revise the limit values for vitamins and minerals in the Regulation relating to Food Supplements and establish rules particular to Norway for addition of ‘other substances’ in food supplements and food. We will also consider how to best deal with addition of vitamins and minerals to foodstuffs.

We will continue to cooperate with the Norwegian Medicines Agency, Norwegian Customs and Excise, the Norwegian Directorate of Health and Anti-Doping Norway. In particular, we will cooperate with the Norwegian Medicines Agency on side effect reporting and find solutions for handling what we call ‘grey area products’.

In our supervisory activities, we will raise enterprises’ awareness of chemical substances as part of the hazard analysis in their internal control systems.

Over the coming two years, we will carry out national control projects for additives.

Special regulations will be issued on acrylamide that will force producers to reduce acrylamide levels in their products as much as possible. We will work to ensure efficient control over the acrylamide area.

COSMETICS

Norwegians buy more cosmetics than most Europeans, and many experience side effects ranging from mild skin irritation to more severe allergic skin reactions. Side effects and misleading information are the main challenges, along with a lack of knowledge about substances in cosmetics that can cause serious long-term effects such as cancer and foetal damage.

Goals

Cosmetic products sold should be safe to use and consumers should not be misled by claims made about the products.

- Reports of side effects shall be followed up.
- Documentation and labelling of cosmetic products shall be improved.
- We shall develop the regulatory framework in line with knowledge about substances and ingredients that are hazardous to health.

Results

Many experience side effects caused by the use of cosmetics and body care products, but the National Register of Adverse Effects from Cosmetic Products received only 170 reports of undesirable effects in 2016. There are probably many unregistered cases, even though it has become easier to report side effects. The most frequently reported products are moisturisers (creams, gels, serums, oils), skin cleansing products, make-up, soap and sunscreen. The most commonly reported side effects are skin symptoms such as redness, itching, swelling/oedema and burning.

We also received 94 international reports of serious side effects and dangerous products in 2016 – a near doubling compared with the preceding year. As far as we know, none of the products in question have been sold in Norway.

FACTS

The cosmetics area includes:

- Cosmetics
- Body care products
- Tattoo products
- Permanent make-up
- Certain injectable products
Our 2015 mapping of pharmacologically active substances in cosmetics identified undesirable content in approx. 15% of the products (moisturisers, day cream, night cream etc.). We followed up the enterprises in 2016 using various measures.

We checked glue products meant for applying fake nails and eyelashes. Analyses showed that four out of ten products contained the banned substance hydroquinone, but none contained the banned substance chloroform. Acrylates, which are highly sensitising substances, were found in two products. We are following up the enterprises that sold these products.

One in four Norwegians under 30 years of age have tattoos, and the tattoos are also bigger than they used to be. Analyses show that the microbiological quality has improved, but that pigments that contain heavy metals and banned aromatic amines are still in use.

Many businesses and difficult rules
Norway has more than 2,000 enterprises that sell or produce cosmetics. We carried out supervisory activities in relation to 64 of them and found nonconformities with 71% of the requirements checked. Most of the nonconformities were linked to inadequate documentation (including products’ safety reports), labelling and registration of cosmetic products. Independent cosmetics retailers had the most nonconformities, while the situation was better in shops that were part of a chain. The cosmetics industry finds the regulations complicated and difficult to comply with.

We safeguarded the interests of Norwegian consumers
Most of the rules in the cosmetics area are decided at the international level. We have worked actively in international forums to contribute to the safest possible use of chemical substances in cosmetics and body care products.

Challenges
Now that we know that a lot of people experience side effects, it is food for thought that so few of them report it. As the responsible authority in this area, we depend on people reporting side effects in order to follow this up.

The cosmetics industry has a high innovation rate, and one in four products is replaced each year. In addition, more and more cosmetics are sold online. This makes it difficult for us to keep an overview, conduct supervisory activities and stay a step ahead.

Plans
We will continue our work in international forums to contribute to making the use of substances we are concerned about in cosmetics safe.

We will provide better guidance and information to the industry and to consumers.

We will follow up enterprises that have sold products about which we have received reports of side effects.

In order to increase our knowledge we will analyse hair dye products for sensitising and/or carcinogenic substances.

We will follow up enterprises’ documentation to show that the products they sell are safe.

SEAFOOD
Norwegian seafood is safe. However, hygiene problems remain in parts of the white fish sector. The use of new marine resources such as seaweeds is a challenge since we do not know enough about the food safety aspects of such products.
Goals

Seafood that is sold in Norway and exported shall be safe.

- We shall document the current status and development as regards undesirable substances in seafood.
- Enterprises shall have functioning internal control in place.

Results

Norway is a major seafood nation and the world’s second biggest exporter of fish. More than 90% of the fish we catch or farm is exported to 143 different countries.

Our monitoring and control programmes show that Norwegian and imported seafood is safe:

- **Farmed fish**: No findings of illegal substances, legal pharmaceuticals and organic and inorganic environmental toxins in excess of the limit values in farmed fish.
- **Imported seafood**: Only in a few cases were levels of undesirable substances exceeding limit values found in seafood imported from countries outside the EU/EEA area.
- **Bivalve molluscs**: Very few findings in excess of the limit values.
- **Atlantic halibut**: Thorough mapping shows that the content of undesirable substances increase with weight, but that it is safe to eat halibut that weigh less than 100 kg. Big halibut weighing more than 100 kg contain higher levels of undesirable substances and should not be eaten. The NFSA and the fishing industry will find measures to ensure that the halibut that reaches the market is safe.
- **Marine oils**: The most common marine oils from known enterprises are safe. Some oils produced from less traditional raw material more often contain contaminants, among other things because they have not undergone any heat treatment. Products have been stopped and the relevant parties followed up.
- **Safe recreational fishing**: Some ports and fjords along the coast of Norway are polluted. We consider on a continuous basis whether it is necessary to issue warnings to recreational fishermen to help them to ensure that the seafood they fish is safe. We have assessed 14 areas based on environmental surveys and established or updated warnings as necessary. These warnings are communicated actively through the websites matportalen.no and miljøstatus.no, as well as via the media.

Our supervisory activities confirm that seafood is safe. However, they also show that hygiene problems remain in parts of the white fish sector. Despite guidance and information work in recent years, and not least a high level of supervisory activity, we have not seen the improvement we were aiming to achieve.

Control campaigns targeting ready-to-eat seafood

We carried out two control campaigns, one targeting ready-to-eat seafood and one freshwater fish. In the campaign targeting ready-to-eat seafood we looked at hygiene conditions and control of *Listeria monocytogenes* and parasites. Eighty-five enterprises all over Norway were inspected. None of them were closed or had a sales ban imposed on them, but we found nonconformities that triggered sanctions in 66% of inspections. The nonconformities concerned failure to take samples for *L. monocytogenes* and inadequate internal control and hazard analyses. We also found shortcomings in maintenance and a risk of cross-contamination etc. in the production premises of some of the enterprises. Our conclusion is that the situation and competence in enterprises vary. We have followed up the enterprises where nonconformities were found. The report will be published in spring 2017.

In the other control campaign, we checked freshwater fish producers’ procedures for preventing botulism and *Listeria monocytogenes*. We checked 52 producers, most of which produce fermented fish (*rakfisk*). The results were good. Most of them have good control over their production. The nonconformities detected were related to sampling.
Follow-up of ESA recommendations regarding bivalve molluscs

ESA's inspection of our official control concerning bivalve molluscs in 2015 found shortcomings in procedures, formalisation of responsibility, network establishment and competence-raising measures. All active mollusc production facilities should be categorised in the course of 2016. We have followed up the recommendations from ESA. Annual HACCP audits have been carried out of approved dispatch and purification centres. We have followed up some of the players’ sampling frequency in connection with harvesting and sales and how they document their risk assessment. We will follow up the remaining facilities in 2017.

Challenges

A lot is happening in the development of new marine products, both at the national and international levels. Furthermore, better and more efficient utilisation of marine resources is a political goal. There is a serious lack of knowledge about the content of undesirable substances in unutilised new marine products that are used in food, feed, fertilisers and cosmetics. In addition to gaining more knowledge, we also have to develop our administrative regime for these new areas. This includes everything from mapping and monitoring via development of official control and regulatory development to guidance and export.

The Pacific oyster is an undesirable species, but is increasing in quantity along the Norwegian coast. It is an attractive food resource, but there is also a certain health risk associated with eating it. We need more knowledge, and we need to develop our administrative regime.

Hygiene conditions in parts of the white fish industry are difficult and demanding to improve. A difficult financial situation as well as a lack of knowledge and will to comply with the regulatory framework make it difficult to achieve improvement through supervisory activities.

Fish farmers use some delousing agents and some pharmaceuticals in combinations and dosages that are not recommended. We have no indications that this has any bearing on food safety. However, we follow this development closely to ensure that it does not develop into a problem.

The supply of marine oils made from unconventional raw materials and produced without heat treatment is growing. Monitoring shows that such oils have often not been sufficiently well purified of contaminants. We will therefore continue our monitoring of such products.

Plans

The primary responsibility for remedying the hygiene problems in parts of the white fish industry rests with the industry itself. We will categorise the enterprises by risk and follow up those enterprises that have the biggest problems by escalating the use of measures. In addition to dialogue with the industry, our follow-up will prioritise the things that must be in place to ensure that good hygiene is maintained – operating procedures, cleaning, personal hygiene and internal controls.

We will improve our knowledge and develop the administrative regime for new marine products and species with particular emphasis on seaweeds.

We will map the content of contaminants in monkfish, plaice, pollack and beaked redfish. The results will be reported and dealt with in spring 2019. The monitoring and control programme for radioactivity in farmed fish is scheduled to be ready in spring 2017.

Norwegian bivalve mollusc production differs from that in the rest of Europe, but the regulations are the same. We will therefore continue our work to influence the EU regulations to better suit mollusc production in Norway. We will also adapt production so that Norwegian bivalve mollusc producers fulfill more of their obligations.
DRINKING WATER

The quality of drinking water is generally good, and more than 90% of the population are connected to waterworks that provide safe water. Many water supply systems are nevertheless vulnerable because the distribution network is old and at risk of leakages. We follow up maintenance plans and make active efforts to encourage municipalities to take more account of drinking water considerations in their long-term planning in order to ensure that consumers continue to receive drinking water of high quality.

Goals

Everyone shall have access to safe drinking water in sufficient quantities.

- Waterworks owners shall ensure a sufficient short-term and long-term supply of safe drinking water.
- Water supply system security shall be improved and the systems shall have good security of supply.
- Owners of big and small waterworks shall be aware of and comply with the new Drinking Water Regulations.

Results

The quality of drinking water is generally good. Very few cases of illness are caused by tap water. Nine out of ten Norwegians are connected to waterworks that provide safe water. The waterworks owners’ reporting to the NFSA shows this. However, some people are still connected to small waterworks that supply water to fewer than 50 people. Since these waterworks do not report to us, we know little about the drinking water they supply.

It is a challenge to keep sources of drinking water safe. New residential and recreation areas, new roads, traffic on outlying land and climate change put pressure on many sources of drinking water and represent a risk of contamination. Waterworks owners therefore have to adapt and make large investments to uphold the same level of safety. In addition, municipalities must establish zones requiring special consideration around raw water sources that are used for drinking water in their zoning plans. Since safe water is such an important resource for society and for people’s everyday lives, we participate actively in regional planning forums that consider plans that could affect the water supply to ensure that considerations for a sufficient supply of safe drinking water are taken into account.

Renewal of the water distribution system moving too slowly

Approx. 51,200 kilometres of water pipes are registered. The distribution network must be systematically replaced in order to prevent deterioration and contamination. Renewing the water distribution network is a big and costly task. Experts are of the opinion that the replacement process is moving too slowly and that there is a big backlog.

The NFSA is the sector authority responsible for water. An internal audit of our use of measures showed that we do not make satisfactory use of the measures at our disposal. To put it briefly, we have to use our strictest measures more to ensure that we achieve the goal of a sufficient supply of safe drinking water. We intend to do that, even if it means ordering waterworks owners to invest several millions or even billions.

Security of supply must be improved

A safe water supply is about more than just pure water. Sufficient quantities of water, good emergency preparedness and good procedures are also required. Several episodes have occurred that could have caused big problems with the water supply. In Southern and Eastern Norway power outages in several locations could have disrupted the water supply. Pipe breaches in the water mains have interrupted the water supply in several areas.

We have audited the emergency preparedness of approx. 500 water supply systems. The results and report will be available in May 2017. However, we know that several waterworks owners...
have to improve their security of supply in order to be able to continue to supply sufficient quantities of safe drinking water in future – even if the costs may run to several billions. For example, the City of Oslo plans to source water from the Holsfjord (an arm of the Tyrifjord) to supplement the water from its current raw water sources.

The quality of waterworks data must be improved
Good waterworks data are important to document water quality, security of supply and risk management. The data quality is unsatisfactory. This makes it difficult for us to fulfil Norway’s international reporting obligations and to follow up waterworks at risk.

One of the main reasons for the poor quality of waterworks data is the reporting system. We have made some simplifications and improvements, but more work remains to be done, and we will continue our efforts. At the same time, waterworks owners must ensure that all their staff have the knowledge necessary to run the drinking water distribution system in a good manner and that they submit good-quality information to us.

New Drinking Water Regulations set stricter requirements for waterworks owners
The new Drinking Water Regulations came into force in late 2016. The goal of the new regulations is to better enable waterworks owners to meet the challenges of drinking water sources under increasing pressure, the poor condition of the distribution network and inadequate security of supply. The regulations also impose on municipalities and county authorities a clearer duty to take considerations for drinking water into account in social planning.

Challenges
Water distribution systems must be upgraded to be ready for the future. Protection of water sources against contamination, inadequate maintenance of the water supply network and inadequate security of supply will remain challenges in the year ahead.

Waterworks owners must do more to prevent unauthorised access to computer and management systems and improve the quality of the data they report to the NFSA.

Plans
We will follow up waterworks owners who do not fulfil their responsibilities and use the measures necessary to achieve results.

We will prepare a long-term plan for following up the waterworks’ security of supply, and we will make it a priority to follow up the results from the control campaign targeting their emergency preparedness.

We will make the new Drinking Water Regulations known and pave the way for owners of small water distribution systems to become aware of and comply with the new requirements that apply to them.

SMILEY INSPECTIONS
The smiley inspections were the biggest initiative of the year. The goal was to make up-to-date information about the results of our inspections of enterprises in the food and beverage service industry easily available to consumers. We visited all registered enterprises in the food and beverage service industry during the first eight months of the year, and the enterprises were very eager to remedy errors and deficiencies quickly.

Goals
Consumers shall know whether the food served by an enterprise is safe.
Results

We inspected about 7,500 enterprises in the food and beverage service industry at least once each and published the results with the relevant smiley inspection symbol. Several of the enterprises have been inspected twice, since the inspection frequency in the start-up phase was eight months. We have carried out a total of 11,000 smiley inspections. We found that the enterprises were quick to remedy errors and deficiencies. The national distribution of inspection outcomes was as shown below:

- 65% smiley
- 32% neutral
- 3% sad

Figure 4 Distribution of smiley inspection symbols in per cent

The most common type of nonconformity was failure to comply with the new mandatory requirement for allergen labelling in menus, followed by deficiencies relating to cleaning of premises, internal control and washing of hands. The best results were found in Møre og Romsdal county and the Trøndelag region, where smiley inspections had already been introduced.

The national food information for consumers regulations require information about allergens in non-prepackaged food to be directly available to consumers in writing, and allergen information was therefore one of the topics covered by the smiley inspections. We made 1,690 decisions regarding inadequate allergen declaration. Such nonconformities were found in about two thirds of enterprises in the Greater Oslo region.

The introduction of smiley inspections in the food and beverage service industry has met our expectations for the introduction period. The scheme has attracted considerable media attention all over Norway. Since the beginning we have registered more than 1,000 unique news stories, most of which feature satisfied owners showing the local newspaper their smiley poster. Many media are still regularly reporting about local food and beverage service enterprises and what symbol they were awarded by the NFSA’s smiley inspection. The enterprises have improved and now remedy errors and deficiency sooner. The technical inspection tool is working well, and the scheme has resulted in rationalisation. At the same time, it is important to develop the scheme to ensure that it helps to constantly improve food safety.

Challenges

The smiley inspection scheme makes great demands of us in terms of uniform inspection practices across all enterprises in the food and beverage service industry and all of Norway.

Plans

We will evaluate the smiley inspections and conduct a user survey among both enterprises and consumers. This will give us knowledge, and the results will be used to develop the scheme further. We will use the experience gained in our further work on digitalisation, on-site inspections and improvement of the official control work in general.
PLANTS, FISH AND ANIMALS

Norwegian plant and animal health situation is still among the best in the world, but the aquaculture industry is facing disease and welfare challenges.

Brief description of the current situation

The NFSA works to promote healthy plants, fish and animals. Plant and animal health in Norway is good. As a result, Norway uses less pesticides and medicines in the food chain from the field to the table than most other countries. As food imports are growing, partly driven by prices, consumers are becoming increasingly aware of these advantages of domestic food production.

Considerable growth in the aquaculture industry is desirable, but the health and welfare problems relating to farmed fish remain an obstacle and must be resolved in order for sustainable growth to be possible.

Effect indicators and overall assessment of goal achievement

<table>
<thead>
<tr>
<th>Effect indicator</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
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<tbody>
<tr>
<td>Number of pests on EPPO’s A2 list deemed to be present in Norway</td>
<td>Satisfactory</td>
<td>The trend over the past five years shows a reduction in the number of listed plant pests detected. We have few outbreaks of disease compared with other European countries.</td>
</tr>
<tr>
<td>Number of outbreaks and cases of serious infectious diseases in farmed and wild fish</td>
<td>Unsatisfactory</td>
<td>The number of outbreaks of listed fish diseases remains high. The main causes for concern are pancreas disease (PD), infectious salmon anaemia (ISA) and problems keeping salmon lice levels under control. Salmon lice and new treatment methods have also created fish welfare problems. The mortality rate remains high.</td>
</tr>
<tr>
<td>Number of outbreaks and cases of serious infectious diseases in domesticated and wild land animals</td>
<td>Satisfactory</td>
<td>Norway’s general animal health status is good compared with other countries. The goal has been to keep the prevalence of disease at a low and stable level. The number of outbreaks of listed infectious animal diseases has been stable in the period 2011-2016.</td>
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We deem the goal of upholding the good health status to have been largely achieved as regards plants and animals. It is a constant challenge to prevent infective agents and pests that are not widespread in Norway from crossing our borders as import grows. It is important that the general public as well as professional parties are aware of the risks.

The health situation for farmed fish is still marked by too many outbreaks of disease, including PD and ISA. Repeated treatment of already weakened fish with pharmaceuticals and non-pharmacological delousing methods cause excessive mortality rates and poor fish welfare. Mortality varies considerably. Surveys show that in the period from 2009 to 2015, half of all sea cages had a mortality rate of less than 10%. This shows that it is possible for the aquaculture industry to reduce mortality.

Strategic measures and priorities

Biology is constantly changing and knows no borders. Good knowledge of plant, fish and animal health – and a unified professional community – are prerequisites for a forward-looking administrative regime. We need knowledge support from strong Norwegian expert communities in order to achieve this. The division of labour between risk assessment and risk management is important to society’s confidence.
Legislation in Europe is becoming increasingly harmonised. This makes things easier for business and industry, the general public and the authorities. The new EU Animal Health Law adopted in 2016 will function as an important framework for all regulation in the area of animal and fish health. Preventive work is emphasised in the new Animal Health Law. Norway is a premise setter in the fish health area, and we will prioritise regulatory work in this area in the years to come.

The health and welfare challenges in the aquaculture industry can only be resolved through cooperation with and between fish farmers. The industry itself must take more responsibility for improving conditions. It will be important in the time ahead that the industry has good internal control and good emergency preparedness and that it implements preventive measures before the situation gets out of hand.

We will continue to work to maintain the good plant and animal health status. New cultivation methods and animal husbandry practices can provide further health and environmental benefits. Integrated pest management and intelligent fertiliser and pesticide use can reduce the environmental impact on fields. The gradual eradication of common airway and intestinal viruses in cattle that the livestock industry has already started will result in major animal health gains and reduce the use of antibiotics.

**PLANT HEALTH**

*Plant health in Norway is good compared with the situation in other European countries, but growing trade increases the risk of new serious plant pests being introduced. This is a threat to Norwegian plant health.*

**Goals**

Plant health in Norway shall remain good.

- No new plant pests shall be established or spread in Norway.
- Enterprises shall have functioning systems in place to safeguard plant health.

**Results**

The NFSA carries out continuous monitoring and mapping of pests.

Of the 154 serious pests that EPPO has included in its A2 list, 14 are known to occur in Norway. Action was being taken to combat 12 of these pests at the end of 2016. Two pests are so widespread in Norway that it is not expedient to use public funds to combat them.

Appendix 2 contains a complete overview of pest findings in 2016. Pear decline phytoplasma (*Candidatus phytoplasma pyri*) was detected in Norway for the first time in 2015, and 2016 was the first year when this pest was systematically mapped. Infection was detected in several clone archives, variety collections, in fruit production and with a plant producer.

Berry fields based on imported plants were examined for strawberry bacterial angular leaf spot (*Xanthomonas fragariae*). No cases were detected, but this pest is one of many that can be introduced with imported strawberry plants.

Ramorum leaf blight (*Phytophthora ramorum*) was found in many parks and gardens with rhododendron, particularly in the Bergen area and along the coast down to Kristiansand. Control of imports, nurseries and garden centres shows that there is still a risk of spread through sales. The disease can be latent (without visible symptoms) in the plants for a long time and become active at a later time. The Dutch authorities, in cooperation with the NFSA, has made their certification system for export to Norway more stringent.

Imports of apple and pear trees were monitored without fireblight or apple proliferation phytoplasma being detected.

**FACTS**

European and Mediterranean plant protection organization (EPPO)

EPPO has 51 member countries and covers nearly all of Europe and the Mediterranean region. EPPO’s objectives are to protect plant health, develop international standards for the prevention of introduction and spread of plant pests, and promote safe and effective control measures (including pesticides).

EPPO’s A2 list contains quarantine pests that EPPO recommends that member countries take action to regulate and combat. The list is revised annually.
**Imported plants can carry new pests**
Woolly aphids were detected in a closed greenhouse trial involving apple trees. They have now been destroyed. The trees were part of a big consignment from the Netherlands, and trees from this consignment had been delivered to a large number of fruit producers all over Norway. So far, spot checks of some of the recipients have not yielded more findings.

**A lot of work still goes into efforts to combat fireblight**
Grimstad municipality was cleared of the most susceptible host plants after extensive fireblight infection was found in Kristiansand in order to create a buffer zone to prevent further spread along the coast towards Eastern Norway. The disease was found in a new municipality in Rogaland county, namely Hjelmeland, but the location in which it was detected was well away from the fruit-growing areas.

**Changes in the regulations assign more responsibility to enterprises**
New import provisions came into force in March, and the responsibility for control of Norwegian plant production was transferred to the enterprises. At the same time, the NFSA published guides to import and production. The main impression is that the biggest enterprises have understood their responsibility and are following it up, but that guidance and follow-up is still needed.

**Construction work can spread soil-borne pests and weeds**
An information and control campaign was conducted targeting contractors, municipal administration, the Norwegian Public Roads Administration and the Norwegian National Rail Administration. The campaign has helped to raise awareness of the risk of spreading pests in connection with construction work.

**Challenges**
Import of plants gives consumers and professional growers access to a broad range of goods, but the increasing internationalisation of trade represents a threat to Norway’s good plant health situation and makes our official control more demanding. There are many risk factors associated with plant imports.

- The plants could have grown in several other countries before being sold to Norway. The origin of plants may be unclear, and the plants’ health status therefore also unknown.
- A higher proportion of imported plants come from countries outside Europe. It is difficult to assess the risk of infection and take appropriate preventive action.
- Interest in importing exotic plants for conservatories etc. and large trees is growing.
- The speed of trade is increasing, and there is strong pressure to make goods available for sale quickly.
- Many pests are difficult/impossible to detect at the time of importation.

**Modernisation of rules for certified production needed**
The certification scheme is an important tool to ensure that fruit and berry growers have access to healthy plants. It is important to establish a regulatory framework for this, among other things because the current provisions are not adapted to modern production methods.

**Plans**
National surveys will still be carried out to map and monitor the situation in Norway. This will also include new pests that are now spreading in Europe, including the insect *Thrips setosus* and the bacterium *Xylella fastidiosa*.

Outbreaks of new pests are regularly reported in countries with which we trade. We will prioritise regulating new pests that can represent a threat to forests and green environments if they are imported with consignments of plants and wood. The 2015 lifting of import restrictions...
for strawberry plants and apple and pear trees entails an increased risk of new pests being introduced to Norwegian fruit and berry orchards. In 2017 we will conduct a control campaign to check how importers are complying with the new import regulations. We will particularly emphasise the enterprises’ reception control.

The measures currently used to prevent and combat fireblight are resource-intensive. The NFSA has therefore initiated a review of its strategy for combating fireblight. The changes will mainly concern regulations and measures to prevent the disease from spreading.

**FISH HEALTH AND FISH WELFARE**

*Parts of the aquaculture industry continues to struggle with disease, high fish mortality rates, inadequate contingency capacity and salmon lice problems. The good fish health and fish welfare goal has not been achieved. We will continue to intensify our efforts in relation to the aquaculture industry.*

Since fish welfare and fish health are closely linked, we will deal with both in this chapter. Fish welfare is also discussed in the chapter ‘Animal welfare and respect for animals’.

**Goals**

Fish health and fish welfare shall be good with negligible use of pharmaceuticals.

- All facilities shall comply with the applicable lice limits, and the amount of pharmaceuticals used to combat salmon lice shall be reduced.
- The number of outbreaks of listed diseases shall be reduced.
- The mortality rate for salmonids between the time of their transfer to sea cages and slaughter shall be below 10%.
- *Gyrodactylus salaris* shall be eradicated from infected river systems.

**Results – The goal of good fish health and welfare has not been achieved**

Norway is still the world’s biggest producer of Atlantic salmon, with a production of more than 1.2 million tonnes. Production has decreased over the past year, and the main reasons for this are salmon lice and disease.

**The salmon lice situation remains serious**

The salmon lice situation was difficult in 2016 as in previous years. There are some positive developments, but it is by no means certain that the situation in the years ahead will be easier. In spring and summer, salmon lice levels were somewhat higher than in 2015, but levels dropped to an average below last year’s level in the autumn. Levels vary from county to county as well as between different areas within counties.

The biggest differences compared with 2015 was far lower levels in Nord-Trøndelag and Møre og Romsdal counties, and dramatically high levels in some areas and facilities in Sør-Trøndelag county. There was a marked increase in the Helgeland region of Nordland county in early autumn, and for the first time in six years, a fish farmer in Vest-Agder county had to use delousing agents. Lice levels in Troms and Finnmark counties remain significantly lower than further south. We identified individual cases of very extensive salmon lice injuries to farmed salmon. In addition to the suffering they cause, such injuries pave the way for other infections.

There are few reports of salmon lice levels in excess of the legal limit, but many fish farmers are unable to stay below the limit throughout the whole year. More than half exceeded the applicable limit once or more. Most of them only exceeded the limit on a small number of occasions, but many facilities exceeded the limit repeatedly.

The requirement for counting in at least half the sea cages is not adapted to the current situation with extensive single-cage treatment. This opens up the possibility of counting lice in and
reporting figures from the most recently treated half of the cages with the lowest lice levels. This means that we will not have an accurate representation of the overall salmon lice situation in the facility even though the regulations are complied with. We have therefore proposed counts in all sea cages every week.

More than half the facilities were approaching the legal limit in some periods, with a high risk of the situation getting out of hand. It is particularly towards the end of the production that it becomes problematic to keep the situation under control. We see that there is a long way to go before we reach the goal of all facilities complying with the salmon lice limits.

In 2015 we introduced the strict measure of imposing a temporary reduction of production in facilities that had long-term severe salmon lice problems. We made 10 such decisions last year, compared with 20 in the preceding year. We see that this measure has helped to increase the respect for serious breaches of the salmon lice limit, and many take action or slaughter fish early at their own initiative. However, there are still many fish farmers who take action too late and accept breaches as long as no decision is made in relation to them.

Reduced use of pharmaceuticals to combat salmon lice

The delousing agent consumption has remained high since 2009. Due to resistance problems the agents are now largely ineffective. In 2016, fish farmers really started using mechanical methods to combat salmon lice. As a result, the consumption of pharmaceuticals to combat salmon lice measured in kilos decreased considerably compared with 2015. However, consumption remains high. Although the goal of reducing the use of pharmaceuticals was achieved, we have a long way to go before fish farmers can control the problem with negligible use of pharmaceuticals. We expect fish farmers to continue developing towards combating salmon lice with minimal use of pharmaceuticals.

The Norwegian aquaculture industry uses very little antibiotics (212 kg), and the use was further reduced. The amount of antibacterial agents sold in recent years corresponds to approximately 0.5–1% of fish undergoing a course of antibiotic treatment.

The NFSA continued its control campaign targeting pharmaceuticals in the aquaculture industry. The goal is to ensure satisfactory use and make enterprises aware of their responsibility in this area. We carried out supervisory activities in relation to fish health personnel and fish farmers, and we got about halfway through the campaign. Nonconformities were detected during most of the supervisory activities. The campaign will be completed in 2017, but we saw concrete results of the campaign. The use of several agents together, known as combination treatments, was significantly reduced. In addition, information and guidance resulted in a more correct and, in many cases also reduced, use.
New solutions caused welfare problems

In 2016, mechanical delousing methods became widely used instead of pharmaceuticals. More than 1,100 mechanical treatments were carried out, which is more than five times the number carried out in 2015. This is a positive development, but it has also caused a deterioration of fish welfare.

Combating of salmon lice now involves more, and often rougher, handling. In addition to injuries, mechanical delousing results in increased mortality and big losses for fish farmers. We received nearly 400 reports of incidents involving poor welfare, injuries and mortality during and after delousing. The increase in the number of reports is due to the increased number of mechanical treatments and the fact that we informed fish farmers of their duty to report such incidents. Other new developments in operating methods have also created fish welfare problems. The use of triploid (infertile) salmon is one such example.

It is positive that fish farmers are developing new operating methods. Nevertheless, this development started too late, and too many poorly tested methods have been introduced in large-scale operations without documentation of their effect on fish welfare. Personnel with expertise on biology and fish welfare should have been involved at an earlier stage of development in order to ensure that the fish can withstand such handling. Although a lot of good work is being done, there is a long way to go before the aquaculture industry can resolve the salmon lice problem without negative effects on health and welfare.

We have established our own expert group in order to meet the challenge that new methods represent in an efficient manner. The group has obtained a good overview of the methods and equipment being tested, ensured uniform handling of cases and provided guidance to users about the applicable requirements. This has helped to bring the trials into a more organised form.

Cleaner fish are an important and much used method for combating salmon lice. The production and use of cleaner fish increased, and this represented an important contribution to more environmentally friendly salmon lice control. We lack loss and mortality data for cleaner fish, but it is common knowledge that a high proportion of cleaner fish die or are otherwise lost during a production cycle. The welfare situation for cleaner fish is unsatisfactory. It is also difficult and challenging to carry out supervisory activities relating to cleaner fish.

Major ISA challenges in Northern Norway, and PD remains a big problem

There were twelve ISA outbreaks in 2016, three fewer than in the preceding year. Nordland county has been hit particularly hard in recent years. Prevention and control of ISA were high on our list of priorities. The consequences and measures required to control the spread of this disease are far more wide-ranging in areas where neighbouring facilities house fish of different sizes than in areas with coordinated falling of groups of facilities.

Pancreas disease (PD) remains one of the most serious diseases affecting the aquaculture industry. The fish suffer, and both individual fish farmers and the industry as a whole incur great financial losses. The number of outbreaks was 138, which is at about the same level as before. The goal of keeping the area north of Sør-Trøndelag PD-free has mostly been achieved, but there have been cases of SAV 2 north of Sør-Trøndelag that give cause for concern. The administration of two different varieties of the disease, with stricter measures north of a defined boundary, has been demanding.

The goal of reducing the number of outbreaks of listed diseases such as ISA and PD has not been achieved.

FACTS

ISA (infectious salmon anaemia) is a serious infectious disease.

The measures used to combat it are slaughtering and two months’ falling of the area.

2016: 12 outbreaks/8 in Nordland county

2015: 15 outbreaks/12 in Northern Norway (9 in Nordland county)
The PD and ISA situation is becoming an obstacle to export. Other countries are increasingly often using fish health requirements with reference to OIE standards to regulate market access.

**Salmon lice, diseases and high mortality rates have caused productivity to decline**

Analyses conducted by Kontali Analyse AS shows that wastage in the aquaculture industry has remained stable at 20% in recent years. The calculated mortality rate for the generations from 2011 and 2014 was also relatively stable at approx. 15.5%–17.5%. The goal of reducing the mortality rate to under 10% was not achieved.

The slaughtering of the 2014 generation was completed in 2016, and it was found that the slaughter volume, average carcase weight and yield per fish placed in the sea all decreased. The average weight of fish lost was the highest since the 2000 generation.

Fewer fish die at the early stages of the production phase. Instead, many big fish die as a result of the increased use of mechanical delousing methods. Forecasts predict that the negative trend will continue for the 2015 generation.

**Table 3 Development in productivity and wastage for Atlantic salmon 11G–15G (Source: Kontali Analyse AS)**

<table>
<thead>
<tr>
<th>Atlantic salmon</th>
<th>11G (Fish placed in sea cages in 2011)</th>
<th>12G (Fish placed in sea cages in 2012)</th>
<th>13G (Fish placed in sea cages in 2013)</th>
<th>14G (Fish placed in sea cages in 2014)</th>
<th>15G (Fish placed in sea cages in 2015) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fish placed in sea cages</td>
<td>280 500</td>
<td>282 000</td>
<td>292 500</td>
<td>302 500</td>
<td>310 500</td>
</tr>
<tr>
<td>Wastage** in %</td>
<td>22.03</td>
<td>19.52</td>
<td>20.82</td>
<td>20.27</td>
<td>21.45</td>
</tr>
<tr>
<td>Est. average weight of fish at wastage</td>
<td>1.25</td>
<td>1.61</td>
<td>1.85</td>
<td>1.91</td>
<td>1.85</td>
</tr>
<tr>
<td>Slaughter volume (tonnes of gutted fish)</td>
<td>1 010 300</td>
<td>1 039 500</td>
<td>1 081 800</td>
<td>1 055 000</td>
<td>1 036 400</td>
</tr>
<tr>
<td>Est. carcase weight (kg gutted fish)</td>
<td>4.62</td>
<td>4.58</td>
<td>4.67</td>
<td>4.37</td>
<td>4.24</td>
</tr>
<tr>
<td>Yield (kg gutted fish) / number of fish placed in sea cages</td>
<td>3.60</td>
<td>3.69</td>
<td>3.70</td>
<td>3.49</td>
<td>3.34</td>
</tr>
</tbody>
</table>

*The slaughtering of 15G was not completed in 2016. The figures for 15G are therefore preliminary estimates.**

**Wastage is the difference between the number of fish placed in sea cages and the number of fish slaughtered and approved, and it includes dead fish, fish that has been destroyed, escaped or been discarded in connection with slaughtering or during transport, fish caught by predators and unregistered wastage.

**Facts**

PD (pancreas disease) is one of the most serious diseases affecting the aquaculture industry today. It increases mortality and makes fish more susceptible to other diseases, makes it more difficult to control the salmon lice situation, reduces growth, makes the production time longer and causes damage to the fillets, which considerably reduces the value of the slaughtered fish.

PD is untreatable by medication. The approved vaccine has limited effect. PD in Norway is caused by the SAV 3 and SAV 2 varieties of the virus. The disease cannot be transferred to humans.
Mortality varies between facilities, and analyses show that most facilities have low mortality rates. The Norwegian Institute of Marine Research has calculated how the overall mortality for fish at cage level breaks down after the salmon has spent 15 months in the sea for salmon placed in sea cages during the period 2009–2015. The results show:

- A mortality rate of less than 5% in about one fifth of sea cages
- About half of all cages had a mortality rate below 10%
- One fifth of sea cages had an overall mortality rate of 20% or more

In our opinion, this shows that it is definitely possible to achieve a considerable reduction of mortality in the Norwegian aquaculture industry.

**Supervisory activities**

The supervisory activity level was similar to 2015. Supervision is a lot more demanding in terms of resources and a lot of preparation and follow-up work is required. We focused on the enterprises with the biggest salmon lice and health problems. It is challenging to follow up the development of new treatment methods. We spent more resources on approval of operating plans to ensure that procedures involving regular and coordinated fallowing of groups of facilities were implemented. We maintained our intensified efforts to deal with the ISA epidemic in Northern Norway.

We provided guidance and worked a lot on making fish farmers follow up their responsibilities. We clearly communicated that we employ strict sanctions for serious violations of regulations. Seven cases were reported to the police, and we imposed non-compliance fees in several cases where farmed fish had experienced great suffering.

We have reason to believe that our efforts in relation to infectious diseases and the aquaculture industry’s efforts to combat salmon lice helped to slow down the negative development. In our follow-up work we placed greater emphasis on internal control and the enterprises' work to manage and improve fish health and welfare, but did not implement supervisory activities relating to groups of companies. Proposals for simplifications and improvements of the Aquaculture Operation Regulations have been distributed for consultation, but have not been adopted. The amendments will facilitate enterprises taking greater responsibility for improving fish health and welfare through their internal control work.

We launched the online service *Fish Health* in collaboration with BarentsWatch. The online service was well received and is much used. It is a good tool for following the development in the salmon lice, PD and ISA situation in the industry as a whole and for individual enterprises.

**Positive development in the fight against Gyrodactylus salaris**

The parasite was not found in any new river systems. Together with the Norwegian Environment Agency we carried out planned measures, including treatments in the Skibotn region of Skibotnelva river and Signaldalselva river.

No river systems were declared free from infection. Several regions (Vefsn, Lærdal, Rauma, Skibotn) have undergone treatment, but more time must pass without the parasite being found there before the declaration can be made. The Lærdalselva river and several river systems in the Vefsn region will be declared free of infection in 2017, provided that the parasite is not detected.

The goal of preventing the parasite from spreading to new regions has been achieved. Provided that the parasite is not found again in the treated river systems, we will shortly have limited and controlled infection to two regions. The regions in question are the Drammen and Driva regions, with a total of seven river systems.

**Challenges**

Salmon lice will continue to be the biggest challenge in the years ahead. PD and ISA, high mortality and inadequate contingency capacity are also problems that must be solved. The aquaculture industry has been struggling with these problems for a long time, but they remain serious and must be seen in conjunction. Better fish health and fish welfare are crucial if the
The industry is to succeed in achieving sustainable growth. It is also an increasingly important basis for ensuring good market access.

Although a lot of good development work is carried out by individual parties, the industry lacks a functioning shared strategy for improving the situation. This has to do with attitudes and willingness to invest in better solutions in time, systematic improvement work and taking action before the situation becomes critical. The parties must cooperate better to coordinate their operations and contingency plans.

New solutions and methods that contribute to preventing and controlling salmon lice and diseases must be developed and introduced, while fish welfare must be safeguarded in a good manner. It is worrying that many fish farmers carry out mechanical delousing every single week.

The salmon lice problems have led to forms of operation based on moving fish that has been placed in sea cages over long distances. Moving fish produced in untreated seawater is an operational practice that entails a high risk of spreading diseases.

Preventing PD from spreading and establishing itself in new areas is challenging, both for the aquaculture industry and for the NFSA. The present strategy means that some fish farmers sometimes have to pay a high price to maintain an infection-free status from which others benefit. The industry and the authorities lack positive measures to stimulate quick slaughtering. We feel that there is a need to introduce measures whereby those affected can be compensated.

Establishing and following up the new administrative regime with production areas where salmon lice will be the indicator for regulating production will be demanding, both for the aquaculture enterprises and for the government administration. The quality of salmon lice data from fish farms and the monitoring programme for wild fish will be crucial to the regime’s legitimacy and confidence in the scheme. This requires us to follow the situation closely and enforce the regulations strictly in relation to those with the biggest salmon lice problems. We will also have to revise regulations in light of the new regime, the development of resistance and new methods for controlling the lice situation in the facilities.

The challenges and rapid development in the aquaculture industry makes great demands of us in terms of expertise and our ability to rationalise our supervisory activities. We are facing challenges when it comes to recruiting and retaining capable employees.

**Plans**

We give priority to supervisory activities relating to salmon lice – particularly in relation to enterprises with high salmon lice levels and fish welfare problems. Our follow-up is intended to contribute to fish farmers taking systematic action to improve fish welfare in general and in connection with the use of new methods in particular. We will continue to develop and reinforce the present administrative practice of imposing temporary reduction of production. Work on the new Salmon Lice Regulations has begun, and we are aiming for the new regulations to come into force in 2018. The control campaign targeting pharmaceuticals in the aquaculture industry will be concluded in 2017, and we will consider what action to take once the results from the campaign become available.

We will continue our work on important disease prevention measures such as improving the structure of aquaculture locations, coordinated fallowing of areas and reduced moving of fish placed in sea cages through active use of operating plan approvals.

We will continue our cooperation with the Norwegian Environment Agency to combat *Gyrodactylus salaris*.

New PD regulations will be distributed for consultation, and we will follow up the new regulations once they are in place.

We will continue our work to simplify regulations and develop them towards more general requirements with more emphasis on internal control. In cooperation with the Directorate of
Fisheries, we will focus our supervisory activities on the internal control system. We will communicate more clearly the enterprise management’s responsibility for ensuring systematic work to improve fish health and welfare. In addition, we will develop procedures for supervisory activities relating to groups of companies.

We will examine whether there is a scientific basis for introducing a disease indicator and consider how suitable indicators can be used to develop predictable criteria for when we can grant applications for increased production in a location or area.

We will rationalise the processing of applications for establishment and expansion in order to free up resources for more cage-side inspections. We will continue to establish supervisory teams for challenging areas in order to raise our competence.

Our participation in OIE and EU forums will continue in order to ensure Norway’s market access and continued influence on international regulations in the fish health and welfare area.

ANIMAL HEALTH

Healthy animals give us good animal welfare, keep the use of medicines down and make livestock production more profitable. Since diseases that we have been spared or have managed to eradicate still exist in other countries, it is important to keep the import of animals to a minimum. Pets can travel legally from EU and third countries to Norway. There is nevertheless a risk that they could bring parasites and infective agents that do not occur in Norway.

Goals

Animal health in Norway shall remain good.

- All animal owners shall prevent diseases from being imported or spread through good infection control measures.
- No new animal diseases shall become established in Norway.

Results

We are continuously monitoring and mapping many infectious diseases in animals. Some of these diseases can also be transferred to humans (zoonoses).

We have detected several new parasites in imported dogs. This gives cause for concern. We have also found treatment-resistant parasites in herds of llamas and alpacas that are known from the countries from which the animals were imported.

The NFSA registered 646 suspected cases of infectious diseases in 2016, of which 450 concerned infectious diseases in animals. Suspicions were confirmed in 232 cases, which were all dealt with and followed up locally.

An overview of findings of infectious diseases in animals in 2016 can be found in Appendix 2 – Effect indicators.

Import of animals to Norway

We inform the public of the risk of new infective agents and parasites being imported to Norway with pets. The ‘pet calculator’ on our website is used a lot, and we have established a dedicated phone service for questions in this area and a Facebook page with information and feedback. We are examining some dogs that are imported legally for antibodies against rabies. An alarming proportion of them do not have protective antibodies, which could mean that the vaccination certificates for some of the animals are not genuine.

‘We still have fewer infectious animal diseases in Norway than in most other countries, and such diseases are less prevalent here.’
KOORIMP (Norwegian Livestock Industry’s Biosecurity Unit) sets additional requirements for import over and above the regulatory requirements, and it is also an important knowledge dissemination organisation. Livestock import remains very limited.

**Supervision of animal health personnel**
The NFSA receives an increasing number of reports of concern relating to work carried out by animal health personnel, both in relation to food-producing animals and in relation to sports animals and pets. We follow up these reports with supervisory activities. No veterinaries have had their authorisation withdrawn in 2016.

**MRSA**
We have continued our continuous mapping of livestock-associated MRSA bacteria in Norwegian pig holdings. Only one new case of LA-MRSA was found in 2016. This gives reason to believe that the infection prevention measures have been effective. Foreign farm workers are tested on return from stays in their home country. Requirements for such testing will be enshrined in regulations.

Samples were also collected from all mink holdings in 2016 because some mink are imported from Denmark, where MRSA has gained a foothold in mink farms. All the samples from mink tested negative. A random finding in cattle has been dealt with through isolation and watchful waiting in the hope that the resistant strain of bacteria will disappear in time.

**Chronic wasting disease**
It came as a complete surprise when chronic wasting disease (CWD) was found in wild reindeer in April 2016. The disease had not previously been found in Europe, and has never been described in reindeer. We quickly started mapping it and introduced measures to control and preferably eradicate the disease.

This newly discovered disease in cervids is infectious and deadly. We have implemented measures to prevent it from spreading in Norway and to other countries, and the European Commission has praised the work carried out. The Norwegian Scientific Committee for Food Safety (VKM) has engaged in intense knowledge collection work. We have good and active cooperation with the environmental authorities, hunting interests and landowner organisations.

More than 10,000 samples of brains from cervids have been collected for mapping purposes through intense efforts and good cooperation between many parties. Only three samples from reindeer have tested positive so far, all from wild reindeer in the same part of Nordfjella wild reindeer area. This gives rise to hope that the disease can be contained and eradicated. It has yet to be determined whether the two cases in moose in Selbu municipality represent a different type of prions, but it is positive that the number of cases detected was so small.

**Challenges**
The number of animals, and especially pets, that arrive in Norway from other countries is increasing all the time. In addition, Norwegians more and more often bring their pets with them on holidays abroad. Both these trends represent a risk to Norwegian animal health. Our possibility of exercising control in this area is limited, but spot checks show that we find exotic parasites and infective agents that were previously unknown in Norway and that also represent a real health hazard for humans. The situation in other EU states is similar to ours.

Norway’s good animal health status is also under pressure from domestic spread of infection. It is crucial for owners of all types of animals to have knowledge of infection control. The new national animal health regulations will give the NFSA a good tool for supervision activities and providing advice in this area.

Further mapping of chronic wasting disease and establishing effective measures to combat the disease will be an important task in the time ahead. If the disease becomes more widespread, that could have dramatic consequences for all cervids in Norway, and possibly also for the reindeer husbandry industry.
Although it is encouraging that only five individual cases of chronic wasting disease have been detected and that only one wild reindeer area has been affected, we are concerned about what consequences this disease could have for Norwegian cervids.

Plans
The MC programmes are reviewed annually and modernised. Our continuous monitoring of diseases should continue at least at the current level.

The EU has adopted a new Animal Health Law that will come into force in April 2021. All underlying regulations must be revised before that. Norway must stay on its toes if it is to ensure that the country’s good animal health situation has the necessary protection under the coming regulations. The European Commission will start by defining which infectious diseases should be listed and subject to requirements within the Community. We are preparing Norwegian input to this process in cooperation with the livestock industry.

We will tighten the regulations for travelling with pets within the freedom of action provided by the EEA Agreement. Information to the public through the NFSA’s question and answer services, websites and social media will be developed further.

We will continue to map chronic wasting disease in cooperation with the Norwegian Veterinary Institute and the environmental authorities. Protective measures, both domestic and in relation to other countries, must be updated. Adopting zone regulations for the areas where the disease has been found may be an option. New compilations of knowledge from VKM, EFSA etc. will form the basis for determining whether it is possible to eradicate the disease or whether we will have to live with it and be prepared for it to spread.

Expanded use of the veterinary medicines register (VetReg) has been planned for 2017. We will establish tools that will enable us to retrieve reports and overviews for use in supervisory and reporting activities in Norway and internationally. Quality assurance of data is a challenge. The plan is to give practising veterinarians access to information about their own prescription profile compared with those of other veterinarians and use this as an awareness-raising tool in the work to promote a more correct use of medicines. General information to the public about when antibiotic treatment is not beneficial will coincide with the good human medicine information measures. In collaboration with the Norwegian Medicines Agency, the Norwegian Veterinary Association and the Norwegian University of Life Sciences (NMBU) we will develop e-learning courses for veterinarians on the use of antibiotics and update therapy recommendations for animals.

SEEDS AND PROPAGATING MATERIAL
Seeds and propagating material produced in 2016 were in good health and of good quality, and will largely cover the demand in 2017. Certain weeds are becoming a growing challenge in Norwegian agriculture.

Goals
Seeds and propagating material should be healthy and of a quality adapted to Norwegian conditions.

- They should be free of weeds, mycotoxins and ergot that can lead to increased use of pesticides.

Seeds and propagating material are relevant to several of the NFSA’s effect goals, but we have chosen to report on variety approval and seed and propagating material under one of them. Most land-based food and feed production begins with seeds and propagating material. The NFSA shall help to ensure access to seeds and propagating material that come from varieties that are adapted to Norwegian conditions, are healthy and of good quality. Poor seeds and propagating material result in smaller crops, poor overwintering in meadowland and pastures and increased risk of weeds and mycotoxins spreading to new areas.
Results

The weather and harvesting conditions were good in 2016. The harvest from 2016 will cover the Norwegian demand for seeds and propagating material of good quality and varieties adapted to Norwegian conditions and the Norwegian climate for several important species.

Public certification is compulsory for seeds and propagating material from cereal grain, grass and clover. The use of certified seeds and propagating material, which is subject to requirements regarding germination capacity, maximum content of weeds and zero tolerance for wild oats, is a way of guaranteeing quality and reducing the risk of undesirable species spreading. The NFSA certified just under 50,000 tonnes of seeds and propagating material from barley, oat, wheat and peas in the 2015–2016 season. This accounts for nearly 90% of the total sales of these species in Norway. During the same period, the NFSA certified just over 2,500 tonnes of grass and clover seeds.

We approved 14 new and better varieties: two oats, five barleys, one wheat, three varieties of timothy, one of red fescue and two of meadow fescue. In addition, two old varieties worthy of conservation were approved (Swedish turnip and sugar peas). These varieties are all adapted to the Norwegian climate and conditions. When approving varieties, the NFSA emphasises their resistance to pests and suitability for use as food and feed. Recently, gluten quality and mycotoxins have been the focus of much attention.

Challenges

Cockspur grass is considered the third worst type of weed in the world. Norway had a very limited occurrence of cockspur grass until a few years ago. In recent years, however, it has become considerably more common in some areas. Therefore, the Norwegian Scientific Committee for Food Safety (VKM) conducted a risk assessment of cockspur grass in 2016 commissioned by the NFSA. VKM deems the potential for harmful effects to be high in relation to grain and potatoes and very high in relation to vegetables.

Plans

The NFSA will follow up with a monitoring and control programme in 2017 to map the occurrence of cockspur grass and other undesirable species in imported feed, food and seeds and propagating material. We will also consider introducing regulatory provisions to help to combat cockspur grass and prevent it from spreading to new areas in Norway.

FEED FOR LAND ANIMALS AND AQUATIC ANIMALS

Safe feed in Norwegian food production

Goals

The feed shall ensure that the food is safe and the animals healthy.

- Feed producers shall have systems in place to ensure that feed does not represent a risk to human or animal health.
- The feed regulations shall address Norwegian considerations, particularly feed for aquatic animals.

Most of the NFSA’s effect goals are relevant to the feed area, but we have chosen to report on the area under just one of them.
Results

Supervisory activities
The regulations are well adapted to the risks that feed can represent, and, generally speaking, the enterprises comply with the regulations.

The NFSA carried out 259 supervisory activities in relation to feed enterprises, which is about the same as in previous years. Out of these supervisory activities, 62 concerned priority areas: feed enterprises’ internal control of undesirable substances, cross-contamination and homogenous distribution of additives, and supervisory activities in relation to feed enterprises that receive and process animal by-products for sale on the feed market.

The most serious cases was a finding of coccidiostatics (Narasin) in a feed product for laying hens without added Narasin and a finding of Salmonella in laying feed. The sources of the contamination were not identified, but the enterprises are being followed up in order to ensure that the measures that the enterprises have introduced are effective. Eggs from the flock that received Salmonella-contaminated feed were withheld, but released following extended sampling with negative findings. Other nonconformities were also identified in the feed area, but they were of a less serious nature and scope.

Monitoring programme
The MC programme for infective agents and contaminants in feed for food-producing animals has not detected new challenges or changes in the situation. The use of additives in fish feed varies, and this should be mapped in greater detail.

We examined the hygienic quality of raw dog feed, meaning feed that has not been subjected to heat treatment. Raw meat and offal contain much higher levels of bacteria than heat-treated feed. Salmonella was detected in one sample of imported feed. The Norwegian Veterinary Institute’s assessment is that when pathogenic bacteria such as *Salmonella* and *Campylobacter* are found in feed, pets could be infected and the infection could be transferred to humans.

ESA inspections
An ESA inspection focusing on the feed area identified some points for improvement. The NFSA should ensure that case processing times are reduced, and it must be checked that delegated tasks are carried out in accordance with the regulations. Finally, it was pointed out that not all establishments in the feed area were registered with the NFSA and were therefore not included in the NFSA’s official lists. We have remedied this problem.

Safeguard Norway’s interests in the regulatory work
The NFSA should focus particularly on matters that relate to fish feed. In 2016, the EFSA Panel on Additives and Products or Substances used in Animal Feed (FEEDAP) initiated an assessment of increased maximum vitamin D addition to feedingstuffs for fish based on input received from Norway.

Challenges
New feed materials present new challenges. New feed materials are introduced due to the shortage of protein feed materials, particularly for food-producing animals. Insects can become an important raw material for feed production, and interest in this topic is high. The EU is working to develop regulations to ensure safe production and use of insects as feed. There is reason to be optimistic about the possibility of a regulatory framework for the use of insect meal in aquaculture feed being put in place in the course of 2017. Other feed materials that could be relevant are products from the food and biofuel industries, new plant species, algae and new marine species. Sources of fat and protein are particularly relevant.

The increased need for feed materials, in combination with the decline in the global economy, results in increased imports from third countries, i.e. from countries outside the EEA area. This requires us to keep good control of imports and importers, also for feed materials of plant origin.
Plans

The NFSA will continue its mapping and monitoring in the feed area. We will prioritise providing information to enterprises and ensuring that our inspectors have adequate expertise, particularly on requirements relating to production and use of new feed materials. We will safeguard Norwegian interests in regulatory development in the EU. Fish feed is a particularly important area.
ANIMAL WELFARE AND RESPECT FOR ANIMALS

Land animals and fish should be well treated and protected against unnecessary stress. This is a fundamental value in our society, and it is also incorporated in the regulatory framework. The owner or person responsible for land animals and fish are responsible for ensuring their welfare. Our supervisory activities show that the welfare of land animals in Norway is mostly good. However, there are challenges in relation to the welfare of farmed fish.

Brief description of the current situation

The overall animal welfare situation is good for land animals in Norway. However, challenges still exist in some areas, particularly the high losses of animals grazing on outlying land and uncovering animal tragedies. We are receiving an increasing number of reports of concern from the general public, and these reports are followed up in different ways.

The welfare situation for farmed fish has been poor in recent years due to, among other things, the high number of treatments. The overall mortality rate is high. (Fish welfare is also discussed in the chapter on fish health and fish welfare.)

Effect indicators and overall assessment of goal achievement

<table>
<thead>
<tr>
<th>Effect indicator</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and proportion of animals that die during transport and lairaging in slaughterhouses, particularly poultry</td>
<td>Satisfactory</td>
<td>Few animals die during transport, and there have been no major serious incidents. Figures in Appendix 2</td>
</tr>
<tr>
<td>Loss of animals at pasture, number and proportion</td>
<td>Unsatisfactory</td>
<td>About 15,000 animals die while grazing on outlying land. Proportion lost: Sheep: 2.76% / Lambs: 6% / Reindeer: 19% (figures for 2015). The figures show a decrease in losses, but they are still considerable. Figures in Appendix 2</td>
</tr>
<tr>
<td>Number of animals used in experiments (total and for fish)</td>
<td>Not fully satisfactory</td>
<td>The introduction of new regulations and a new administrative regime in mid-2015 means that we do not have comparable figures. The figures for 2016 are not available yet, but our impression is that the number of animals used in experiments is decreasing. Figures for 2015 in Appendix 2</td>
</tr>
</tbody>
</table>

Land animals and fish should be well cared for. It is the NFSA’s responsibility to help to resolve many situations where animals suffer over time as a result of poor care.

Transport and lairaging in slaughterhouses is not a major threat to land animal welfare in Norway. Since mortality in this area says little about conditions in the animal holdings, we believe that there is reason to reconsider the suitability of this indicator for measuring good animal welfare and respect for animals. There were not many serious incidents in 2016.

Grazing on outlying land is in itself a contribution to ensuring good welfare, but it also entails a risk of injury, illness and parasite or predator attacks. The loss figures are still high, with more than 6% of lambs at pasture dying during the grazing season.

Both a new administrative regime and new national regulations on the use of animals in experiments came into force in 2015. The new regulations provide new definitions of keeping and use of animals in experiments. As a result of this, figures before and after 2015 are not comparable, and we must use 2016 as our baseline for assessing the development in future. The number of animals used in experiments varies a lot, but it seems to be going down.
Strategic measures and priorities

We will continue our cooperation with the livestock industry and the environmental authorities to reduce losses of animals at pasture.

We will uncover poor land animal and fish welfare, among other things through cooperation with the police, other public agencies and the industry, as well as through reports of concern.

Our supervisory activities shall be risk-based, while we will also carry out some screening activities. We will contribute to knowledge about keeping animals, influence attitudes to animal welfare and continue to communicate results from our supervisory activities.

LAND ANIMAL AND FISH WELFARE

The overall animal welfare situation is good, but not fully satisfactory for all production forms or all animal holdings. The general standard is high among Norwegian farmers and other keepers of land animals, and we find few serious violations of the regulations. However, too many animals die while grazing on outlying land. The welfare situation for farmed fish has been poor in recent years due to, among other things, the high number of salmon lice treatments. Mortality is too high.

Goals

All animals in Norway shall have a good welfare situation.

- We shall uncover poor animal welfare through supervisory activities, cooperation with the police, other public agencies and the industry, as well as through reports of concern.
- When animals suffer over time as a result of poor care, necessary measures must be implemented more quickly (than they have been so far).
- We shall provide information about measures that the farmers themselves can implement to reduce the loss of animals grazing on outlying land.
- The mortality rate for salmonids between the time of their transfer to sea cages and slaughter shall be below 10%.

Results

Control projects

The requirement that all cattle shall be let out to graze every year (the exercise requirement) has been followed up with supervisory activities. The general impression is that most farmers let their animals out to graze. We granted a very small number of dispensations from the exercise requirement, mostly related to building modifications or the construction of new buildings.

A national supervisory project on calf welfare was carried out, but the summary is not yet available. The final report will be published, and it will be aimed at the industry.

The NFSA's Central Region carried out its own animal tragedy prevention project in cooperation with the Norwegian Farmers' Union and other organisations. This cooperation entails closer monitoring and follow-up of animal welfare concerns by the partners.

We are receiving more reports of concern

We have few serious animal welfare cases concerning land animals, although every such case is one too many. The NFSA, in good cooperation with the local animal protection boards, has carried out 9,440 supervisory activities in relation to land animal welfare in animal holdings. The use of stricter measures, such as bans on activities and reporting cases to the police, is increasing. In our assessment, the increased number of reports of concern and the increased level of supervisory activity mean that we uncover more cases of unsatisfactory animal welfare than before. The NFSA also focuses on good use of measures. We decided to close down 59 animal holdings, 32 keepers of animals were reported to the police, and bans on keeping animals

FACTS

Factors that contribute to good animal welfare include:

- Good attitudes among animal owners and in society at large
- Modern and comprehensive regulations
- A national supervisory authority with clear powers and a wide range of measures at its disposal
- Good animal health
were imposed on 27 animal holdings. These findings are described in more detail in our separate annual report on animal welfare (in Norwegian only).

Any animal tragedy is one too many. We believe that we uncover the vast majority of cases of serious neglect of production animals and horses. We registered such cases in 42 land animal holdings in 2016, the same level as the previous year. There is greater uncertainty attached to the figures for pets, since they are not subject to any registration requirements. The NFSA cooperates with the livestock industry, the health authorities, organisations and other parties both at the central and local level to prevent and uncover such incidents.

The «Notify us» service on the NFSA website is being used more and more. Many people are concerned with animal welfare and report poor conditions that they discover. Reports of concern about suffering animals are important information that we will always follow up. At the same time, a lot of work goes into filtering out unfounded reports due to such things as conflicts between neighbours. We received a total of 9,400 reports in 2016, up 10% compared with the preceding year.

**Foot pad registration in broiler chicken is effective**

Foot pad lesions are a good indication of welfare in broiler chicken flocks that has been used since 2013. Each flock is scored and assigned to a category. The result of this assessment determines the permitted stock density in the chicken house for the next batch. About 95% of flocks fall into the top category. The transition to Narasin-free feed does not seem to have had any adverse effect on foot pad scores.

**Improved results from supervisory activities in relation to fur animals**

The number of registered fur farms was about the same as in the preceding year. Fur animals are followed up more closely than other species. About 60% of mink holdings and approx. 30% of fox holdings were inspected. More than half of the inspections were unannounced. There was a clear decrease in violations of the regulations compared with the preceding year, and few serious findings. The close follow-up of fur farms over several years appears to be having an effect.

<table>
<thead>
<tr>
<th>Table 4 Fur animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of registered animal holdings</td>
</tr>
<tr>
<td>Number of supervisory visits</td>
</tr>
<tr>
<td>Number of cases with notification of decision *</td>
</tr>
<tr>
<td>Number of cases where decisions were made *</td>
</tr>
<tr>
<td>Number of cases where decisions were made without prior notification *</td>
</tr>
<tr>
<td>Number of cases where the NFSA decided that an owner had to put down animals</td>
</tr>
</tbody>
</table>
Number of cases where the NFSA decided that animals had to be put down and arranged for them to be killed: 3

Number of cases where the NFSA imposed non-compliance fees: 0

Number of cases reported to the police: 0

Number of cases where bans on activities were imposed: 0

Percentage of unannounced animal welfare inspections: 80% 58% 80% 69% 66% 57%

* This concerns decisions instructing fur farmers to remedy any non-conformities. Decisions to impose coercive fines or non-compliance fees, for example, are not included.

Transport of land animals

Animals that are not fit to be transported shall not be moved to slaughterhouses. Non-compliance fees are a suitable reaction to violations of the regulations and were imposed in 17 such cases. There were not many serious incidents. The figures for 2016 are shown in a table in Appendix 2.

Losses of animals grazing on outlying land remains high

About 15,000 animals die while grazing on outlying land. Although the number of animals that die while grazing on outlying land has decreased, the number is still too high. Big challenges remain, such as the wolf situation in the Rendalen area and wolverines in the Jotunheimen mountains. We cooperate well with the county governors, municipalities, the regional predator management committees and users of grazing land on handling predator problems in accordance with the cross-party predator management compromise.

Experimental animal administration

New national regulations on the use of animals in experiments, and with them a new administrative regime, came into force in July 2015. The new regulations differ from the old ones in terms of the keeping and use of animals covered. It would therefore give an incorrect impression of the development if we were to compare experimental animal figures for 2015 and 2016 with figures from preceding years. In order to follow the future development, we must use 2016 as our baseline. The NFSA considered 750 applications for use of experimental animals and 22 applications for approval of enterprises with experimental animals in 2016. We also carried out 12 inspections of experimental animal enterprises.

The three Rs — refinement, reduction and replacement — are key concepts in the new regulations, and these considerations are taken into account in the NFSA’s consideration of all applications.
It is our impression that applicants are aware of this and that the number of animals used in experiments is decreasing, even though we have no figures to confirm our impression this year.

**Homeless cats**

Animal welfare for homeless cats was an important topic in our work in 2016. We organised a public awareness campaign in cooperation with the Norwegian Veterinary Association and several animal welfare organisations with which we cooperate well at both the national and local level. We held an open animal welfare seminar entitled *Dyrenes Dag* on the topic, and our main message was that owners must take care of their cats and have them ID marked and neutered. We developed a guide for inspectors to use in the future work with homeless cats. In our opinion, competence-raising measures and raising awareness of cats' needs will help to improve cat welfare.

**Cooperation with the police and cases brought before the courts**

A collaboration has been entered into between the NFSA and the police in the field of animal crime (animal police) in NFSA's Central, Southern and Western regions. The goal of this collaboration is to exchange knowledge and handle serious animal welfare cases better.

The NFSA has long been of the opinion that the sentencing level in animal crime cases has been too low, and we have worked purposefully to have serious cases considered by the Supreme Court and promote stricter sentencing. In 2016, the Supreme Court pronounced its first two judgments in such cases since the introduction of the new Animal Welfare Act in 2010. The sentences imposed were stricter than indicated by previous practice, and these judgments send important signals to the district courts and courts of appeal about such cases. A development towards stricter sentencing shows that society reacts when crimes are committed against animals.

**New methods bad for fish welfare**

In 2016, mechanical delousing methods became widely used instead of pharmaceuticals. Nearly five times as many mechanical treatments took place in 2016 as in 2015. This development has had an adverse effect on fish welfare. We received nearly 400 reports of incidents involving poor welfare, injuries and fish dying during and after delousing. The increase is due to the increased number of mechanical treatments and the fact that we have informed fish farmers of their duty to report such incidents.

Other new developments in operating methods have also created fish welfare problems. The use of triploid (infertile) salmon is one such example. It is positive that fish farmers are developing new operating methods. However, many poorly tested methods were introduced on a large scale without their effect on fish welfare having been documented. A lot of excellent work was carried out, but there is a long way to go before the aquaculture industry succeeds in solving the salmon lice problem without negative fish welfare consequences.

Cleaner fish are an important and much used method for combating salmon lice. The production and use of cleaner fish increased, and this represented an important contribution to more environmentally friendly salmon lice control. We lack loss and mortality data for cleaner fish, but it is common knowledge that a high proportion of cleaner fish die or are otherwise lost during a production cycle. The welfare situation for cleaner fish is unsatisfactory. It is also difficult and challenging to carry out supervisory activities relating to cleaner fish.

**Challenges**

**Fish welfare remains a problem**

New solutions and fish farming methods that contribute to preventing and controlling salmon lice and diseases must be developed and introduced, while fish welfare must be safeguarded in a good manner. The increasing amount of handling and number of salmon lice treatments are challenging. It is unfortunate that many fish farms are now carrying out mechanical delousing every week. Cleaner fish must also be taken better care of.
Loss of animals grazing on outlying land is the biggest animal welfare challenge
Losses have been somewhat reduced, but are still too high. Most losses are caused by accidents, injuries and illness, and such events may be difficult to prevent. The cross-party predator management compromise stipulates guidelines for how to deal with loss caused by predators. The NFSA has few measures at its disposal that can be effective in reducing losses.

Risky animal husbandry can develop into serious animal welfare cases
Animal holdings where standards are low over time (risky animal husbandry) can cause long-term suffering for many animals and result in serious animal welfare cases. This applies to both production animals and to sports and non-commercial animals. It is challenging to supervise such holdings, and it can take time to either raise standards to an acceptable level or close down the holding. Homeless cats are a challenge, particularly because they breed so that a problem with homeless cats will soon come to involve a large number of animals. This challenge must be resolved in cooperation with the municipalities and voluntary organisations.

Plans
The NFSA will follow up more closely animal holdings with low standards over time and become clearer in its use of measures in relation to them. In this way, we hope to more quickly see lasting improvement or close down the holding. It is important to us to continuously improve our cooperation with organisations and stakeholders. We will develop our cooperation with the police further.

As regards loss of animals at pasture, we know that it is crucial that the animals are in good condition on release and are well supervised. We will continue to follow up animal owners and prioritise measures to spread information about the importance of correct anti-parasite treatment, feeding and care of lambs before releasing them to graze on outlying land.

In 2016 as in previous years, animal welfare in fur farms has attracted a lot of attention. The white paper on the future of fur farming was considered in January 2017, and the NFSA expects to be charged with following up the decision.

We will follow up the results from the national control project on calf welfare in milk production. The report from the project is completed, and we will consider whether regulatory amendment or other measures are necessary.

We will communicate more clearly the aquaculture industry’s responsibility for working systematically to improve fish welfare in aquaculture facilities, including by introducing new methods. The NFSA will also look into whether there is a scientific basis for introducing a disease indicator. Mortality is a factor to consider in this connection.
QUALITY AND HONESTY

Food sold in Norway is not always adequately labelled. Reliable labelling is particularly important for people with allergies. The sale of food outside the conventional channels is increasing, and this represents a challenge to official control and to the tracing systems. The quality of seafood varies. This means that optimum use is not always made of marine resources and that consumers do not always get the quality they deserve. Food crime is a growing challenge.

Brief description of the current situation

Guidance on correct food labelling in combination with consumer awareness form the basis for making informed choices. Many enterprises struggle to comply with the rules on food information and nutritional and health claims because the regulations are complicated. This shows that there is a need for more guidance regarding the different labelling requirements.

Proper labelling is particularly important to people with allergies, but it is also important in order to enable people to choose the right foods and ensure fair competition between enterprises.

The occurrence of illegal genetically modified products in Norway is low and stable. Many importers nevertheless need to improve their procedures to prevent the import of illegal genetically modified products.

The sale of foodstuffs outside the conventional channels such as shops and restaurants is increasing. It is a big challenge to keep an overview of who sells food and how it is cooked and labelled.

Our supervision of the tracing systems must be developed further. It is still possible to improve the quality of marine resources. Fish that could have been used for food is used in alternative ways because it has not been properly handled. In many cases, the shelf life of fish is shortened by poor quality, and consumers do not always get the quality they deserve.

The official Norwegian Food Composition Table is available online, and states the energy and nutrient content of the most common foods in Norway today. The table is continuously updated and is used more and more.

Food crime is a big problem in Europe and can be expected to increase over the coming years. Campaigns targeting food crime have led to more cases being reported to the police and to the destruction of foods potentially hazardous to health.

Effect indicators and overall assessment of goal achievement

<table>
<thead>
<tr>
<th>Effect indicator</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and proportion of samples that tested positive for Salmonella and samples in which the applicable limit values for undesirable substances were exceeded in relation to the total number of samples</td>
<td>Satisfactory</td>
<td>One case of Salmonella detected in feed. The case is described in the chapter on feed. This is at about the same level as in preceding years, and we consider the situation satisfactory.</td>
</tr>
<tr>
<td>Number and proportion of decisions pursuant to the national food information for consumers regulations in relation to the total number of decisions regarding foodstuffs</td>
<td>Not fully satisfactory</td>
<td>1,800 decisions were made pursuant to the national food information for consumers regulations. This accounts for 19% of all decisions concerning foodstuffs. This represents an increase compared with the preceding year, but it is difficult to make a direct comparison between the figures. Allergens is a control item in the smiley inspections, and we have therefore carried out far more inspections in this area than in previous years. Our assessment is that the status for this indicator is about the same as in the preceding year, however.</td>
</tr>
</tbody>
</table>
We consider the overall goal achievement not fully satisfactory. The reason is inadequate compliance with the regulations concerning food labelling and nutrition and health claims.

**Strategic measures and priorities**

The control campaign that checks food labelling on the Norwegian market, the annual labelling check, provides knowledge about the status and developments, and it will therefore be continued. We will contribute to improve compliance with the labelling requirements by preparing guidance material on food information and nutritional and health claims.

We must develop our expertise on and supervision of traceability systems. We must also raise awareness in and provide guidance to the industries that deal with food, feed and seeds and propagating material that may contain GMOs about the need for internal control.

We will continue to cooperate with the Norwegian Fishermen's Sales Organisation on seafood quality and simplify and clarify certain provisions of the fish quality regulations.

We will continue to participate in international projects to uncover food crime and equip our own organisation to uncover fraud, as well as prepare a risk assessment of the food crime status in Norway.

**LABELLING, TRACEABILITY AND QUALITY**

*Food sold in Norway is not always adequately labelled. In order to guarantee food safety, enterprises must be able to trace and, if relevant, withdraw goods that are found to represent a health risk. Correct labelling is a good tool in this respect.*

**Goals**

Labelling and traceability shall enable consumers to make safe and informed decisions, and they shall get the quality that they expect.

- Food shall be labelled in accordance with the requirements set out in the regulations.
- All enterprises shall have documented procedures in place for tracing and, if relevant, withdrawing goods.
- No unapproved genetically modified food, feed or seeds and propagating material shall occur.
- The provisions of the fish quality regulations shall be complied with so that the fish sold is of the quality that consumers expect.

**Results**

**Food information**

In 2016, nutrition declarations were made mandatory for most prepackaged foods. Therefore, we have prioritised providing guidance to the industry about such declarations. We have prepared information material aimed at consumers about labelling, nutrition declarations and the requirement to provide information about allergens in non-prepackaged foods. As part of a Nordic collaborative project on allergen labelling, 97 Norwegian products were checked, and 12 of them were found not to be satisfactorily labelled. This is 12%, and an improvement compared with the 23% nonconformities found in a corresponding Nordic control project in 2012. The 2016 project found that the allergen labelling on 10% of foods was incorrect, and the level is about the same in Norway as in the other Nordic countries.

The national food information for consumers regulations require information about allergens in non-prepackaged food to be available to the consumer in writing. Such information about
allergens is checked as part of the smiley inspections, and we made 1,690 decisions based on inadequate allergen information. This means that decisions were made in relation to 15% of the enterprises. Another 110 decisions were made based on other general labelling requirements for prepackaged food. This is at the same level as in previous years. Inadequate quantitative ingredient declaration accounts for the highest number of nonconformities.

Supervisory activities carried out confirm our findings from previous years, namely that compliance with regulations concerning the use of nutritional and health claims must be improved. They also confirmed the impression that enterprises use illegal medical claims about certain foods, particularly food supplements. We have also informed bloggers about the rules for marketing of food supplements after uncovering illegal marketing.

**Traceability**
In October 2016 the EFTA Surveillance Authority (ESA) carried out an inspection of tracing and labelling of meat and products containing meat and of the use of additives in such products. The conclusion was that the Norwegian official control system in this area is not sufficiently developed and implemented. Even though the NFSA carries out risk assessments based on knowledge about the industry and the individual enterprises, this work is not as systematic as ESA would like.

**Genetically modified food, feed and seeds**
No unapproved genetically modified food, feed or seeds and propagating material shall occur. In this area, we prioritise:

- monitoring the market by analysing high-risk products for GMOs and ensuring that importers have good procedures in place to ensure compliance with regulations
- maintaining a high level of protection in line with political guidelines and international regulations
- raising awareness and providing guidance to industries about the need for internal control in this area

The NFSA examines foods and feedingstuffs that consist of or contain maize, soya, colza, rice or papaya. Our monitoring activities have identified few findings of illegal content, but many of trace contamination, see Table 5. The occurrence of illegal genetically modified food and feed was low in 2016 as in previous years, and no GMOs were detected in imported seeds. Only 2 out of 128 samples contained illegal GMOs, and both consignments were withdrawn from the market. In 56 of the samples (43%), mostly of feedingstuffs, low-level contamination with EU-authorised genetically modified material that is not considered illegal was found. This is an increase compared with 2015 and may be due partly to the difficulty of guaranteeing GMO-free transport lines in the global market and partly to the importers not having satisfactory procedures to actively reduce the occurrence of trace contamination.

<table>
<thead>
<tr>
<th>Table 5 Development over years</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of samples of food/feed/seeds and propagating material</td>
<td>137</td>
<td>113</td>
<td>121</td>
<td>134</td>
<td>128</td>
</tr>
<tr>
<td>Number of violations of regulations</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Number of samples with permitted trace contamination</td>
<td>52</td>
<td>40</td>
<td>49</td>
<td>53</td>
<td>56</td>
</tr>
</tbody>
</table>

**Quality**
New and simplified national regulations relating to the quality of milk and dairy products came into force on 1 January 2016. This makes the regulatory framework simpler and less extensive for consumers, enterprises and the authorities. In order to make things simpler for enterprises and for the NFSA, we have prepared a guide on labelling of milk and dairy products and on how to use designations for different types of edible ice.
The trial scheme whereby the Norwegian Fishermen’s Sales Organisation has been tasked with carrying out supervisory activities pursuant to the fish quality regulations continued in 2016. The three-year scheme will be evaluated in 2018 in cooperation with the research institute Nofima.

**Challenges**

The national and international food markets are developing rapidly. The increasing complexity of food production and trade is making things difficult for the industry, consumers and the supervisory authorities. Good traceability and labelling is becoming more important.

Online shopping and marketing via social media are relatively new phenomena, and new sales channels are appearing all the time. On social media, food boxes are sold, sales of food between private individuals are arranged and food is offered via dedicated groups. Some of the new players are not familiar with the regulations and omit to register their enterprise with the NFSA, among other things.

This makes it difficult for the NFSA to reach consumers and new enterprises with balanced information about food and the regulations that apply when selling food.

The extensive and detailed regulations for use of nutritional and health claims have proved to be difficult to understand and observe.

Many food supplements are marketed using illegal health and medical claims to convince consumers that they need the product and that it prevents, heals or alleviates illness or pain. This could lead consumers to stop taking necessary medication and replace it with food supplements. Some food supplements can also cause serious side effects if taken together with particular types of medication.

New genetically modified varieties of different plant species are approved all the time, both in the EU and in countries outside the EEA area, and this makes it particularly challenging for both public and commercial organisations to keep up with developments on the analysis front with rising costs and complicated technical documentation. The level of knowledge about genetic modification and the internal control required to prevent illegal import varies greatly in the industries. It is difficult to guarantee GMO-free transport lines in the global market. Not all importers have adequate procedures in place for actively reducing the occurrence of trace contamination.

The quality of white fish varies, and there is a lot to be gained from better handling of fish at all stages. The NFSA will follow this up by enforcing the provisions of the fish quality regulations. As a trial scheme, the Norwegian Fishermen’s Sales Organisation is carrying out supervisory activities pursuant to the fish quality regulations in Northern Norway. Quality improvement measures are primarily the parties’ own responsibility, and several have initiated such measures.

**Plans**

The NFSA has planned a broad follow-up effort to remedy the shortcomings pointed out after the ESA inspection on traceability. This follow-up will include internal training of inspectors and guidance on how traceability can be documented. Traceability will be a topic in a higher proportion of inspections than before.

We will complete a national control project initiated in 2016 that targets enterprises that produce or import additives for use in the food industry.

The 2017 labelling check campaign will cover milk, dairy products and milk-based ice. Further guidance to the industry on labelling, such as ‘misguidance’, will be completed in 2017.

The NFSA will revise the guide on using nutritional and health claims based on, among other things, experience from supervisory activities. We plan to carry out supervisory activities in relation to one or two product groups to check compliance with the Keyhole label regulations in 2017.
We will intensify supervision of imports of genetically modified products with more attention to internal control. We plan to map the content of genetically modified ingredients in feed for dogs and cats, birds and rodents. We want up-to-date knowledge about the occurrence of illegal ingredients in pet feed, and we would like to help to raise competence and prevent the import and sale of illegal products in this sector.

We will simplify and clarify certain provisions of the fish quality regulations to make it easier to comply with them.

**MONITORING THE NORWEGIAN DIET**

In order to determine the health effects of food, we need knowledge about the content of the food we eat and how much we eat of different foods. The Norwegian Food Composition Table has been updated with more types of food.

The discipline area ‘food and diet monitoring in Norway’ consists of the Norwegian Food Composition Table, the diet calculation system KBS and the national food intake surveys. The NFSA is responsible for following developments in the nutritional content of foods and for the dietary calculation tool Kostholdsplanleggeren.

**Goals**

The Norwegian Food Composition Table and Kostholdsplanleggeren are intended to provide a good service to consumers, educational institutions and the industry.

**Results**

Knowledge about what nutrients the food that we eat contains is necessary in order to monitor developments in the population’s diet and carry out risk assessments relating to the nutrient content of foods, among other things.

The Norwegian Food Composition Table was updated with 67 new and 180 revised foods, and it was made more user-friendly. Following an analysis project carried out by the NFSA, several best-selling frozen pizzas and fish products were added to the Norwegian Food Composition Table. The results showed a slight decrease in salt content in pizzas, and all the products contained minimal amounts of heavy metals and were free of trans fats. Fifteen fatty acids were also added to the Norwegian Food Composition Table. The food industry uses the table to prepare nutrition declarations. The number of page views at the website matvaretabellen.no has increased since 2013.

![Figure 9 Number of page views on the Norwegian Food Composition Table and Kostholdsplanleggeren websites](image)

It is now possible to log on to Kostholdsplanleggeren via Feide (the Ministry of Education and Research’s solution for secure identification in the education sector), and an English version has been launched.

**FACTS**

The discipline area ‘food and diet monitoring in Norway’ consists of the Norwegian Food Composition Table, the diet calculation system KBS and the national food intake surveys.

The Norwegian Food Composition Table is available online and provides an overview of the energy and nutrient content of the most common foods eaten in Norway today. Data from the Norwegian Food Composition Table are used in the national food intake surveys and in the diet calculation system KBS, which is administered by the University of Oslo.

Kostholdsplanleggeren is a dietary calculation tool managed by the Norwegian Directorate of Health and the NFSA. It is based on data from the Norwegian Food Composition Table, the Norwegian dietary and physical health recommendations, and measurement and weight data for foods.
Challenges

New foods are launched every year, while ingredients and production methods are constantly changing. In addition, food analysis methods and quality requirements are improved. This makes the work to keep knowledge about nutrients in foods up to date more and more challenging, which makes it more demanding to provide data of sufficient quality for food intake surveys and risk assessments.

Plans

We will carry out an analysis project (for nutrients and contaminants) targeting best-selling types of bread, breakfast cereal and crispbread. The Norwegian Food Composition Table will be expanded with more foods and up-to-date nutrient values. The websites Matvaretabellen.no and Kostholdsplanleggeren.no will both be made more user-friendly.

FOOD CRIME

The increasing internationalisation of food production results in an increasingly complex sales chain. It is important that both the food industry and the NFSA has the right expertise to uncover fraud.

Goals

Serious crime in the food chain shall be uncovered and dealt with.

- The NFSA shall cooperate more with national and international partners.
- We shall keep on top of the situation in Norway.
- We shall strengthen and structure work and training internally in our organisation.

Results

Food crime is an intentional violation of regulations in order to achieve financial profit. The NFSA has contributed to several external courses and forums in cooperation with the industry about how enterprises can protect themselves. We have cooperated actively with other public agencies, including the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime (Økokrim), the Norwegian Tax Administration, the Norwegian Labour Inspection Authority, the local police and tax collection offices, and the Norwegian Labour and Welfare Administration (NAV). The professionalisation of some inspectors’ work has resulted in an increase in the number of cases reported to the police and to the destruction of products hazardous to health, as well as good international cooperation in a concrete case.

At the international level, Norway has taken part in the international operation OPSON V and engaged in dialogue with partners in the EU/EEA on best practice for fighting food crime. A new EU reporting system for cooperation in the investigation of food crime cases has been well established also in the NFSA.

Challenges

Food crime is a big problem in Europe and can be expected to increase over the coming years. The increasing complexity of production and transport of ingredients and foods makes it more difficult for enterprises and supervisory authorities to uncover food crime. This represents a threat to food safety and increases the risk of consumers being cheated. There is an increasing number of market players that want to make money through food fraud. They are difficult to identify because they are constantly changing their activities and the methods they use in their fraud, for example via the internet.
Food crime cases requires other tools and different expertise than the NFSA possesses at present. In ordinary supervisory activities in connection with a serious criminal case, special knowledge about how to obtain evidence for subsequent investigation is needed. Uncovering various forms of forged documentation often requires specific knowledge about such documentation.

**Plans**

The NFSA will prepare a risk assessment for food crime to provide a basis for future prioritisation. We will also contribute to developing Nordic cooperation to promote a joint Nordic risk assessment. We will expand our cooperation with Norwegian Customs and Excise and the police so that more of our priority cases can result in police investigation and conviction.
ENVIRONMENTALLY FRIENDLY PRODUCTION

All food and feed production has an impact on the environment, but it is important that this impact is no bigger than it has to be and that it does not endanger other species or put food safety at risk. Correct and satisfactory use of pharmaceuticals and pesticides is important in order to achieve this. At the same time, environmental considerations dictate that resources must not go to waste but be fully utilised, for example by returning by-products and waste products to the value chain in a safe manner.

Brief description of the current situation

Sustainable solutions is one of the preconditions for future food and feed production. In this chapter, we discuss two issues relating to environmentally friendly production:

- Factors that affect the environment and other species
- Sustainable utilisation of resources

Environmentally friendly production has to do with, among other things, use of pharmaceuticals and pesticides and the production’s impact on wild species. ‘One Health’ is a term used to describe the acknowledgement that human and animal health and welfare are related. This also includes the natural environment of animals and humans. Contaminants and infective agents spread through the food chain, and pharmaceutical and pesticide residues end up in our environment. One example of an important question in this connection is what happens to bacteria resistant to antibiotics in the environment and whether they can be found in fertilisers and soil.

The NFSA plays an important role at the intersection between food safety and good resource utilisation. We are charged with ensuring food safety without being an unnecessary obstacle to good resource utilisation. In our areas of responsibility, this covers anything from reuse of packaging to safe handling of by-product and waste being reused as fertiliser or soil improver in a safe manner.

Effect indicator and overall assessment of goal achievement

<table>
<thead>
<tr>
<th>Effect indicator</th>
<th>Goal achievement</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticide sales (tonnes of active agents)</td>
<td>Not fully satisfactory</td>
<td>There has been a slight increase in sales of active agents, see the table in Appendix 2. The main reason why the health risk has remained stable is that sales of certain preparations have remained low since the decrease in 2015. The main reason why the environmental risk has increased by 8% is the approval and use of the active agent bixafen, which is important to prevent resistance in fungal diseases that affect cereals.</td>
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</table>

The use of pharmaceuticals to combat salmon lice decreased significantly compared with 2015. The main reasons for this is resistance to the delousing agents, the use of mechanical methods and our efforts. The use is still too high and must be carefully monitored. Wild salmonids were exposed to salmon lice infection, which had a negative impact.

Sales statistics for pesticides show that the quantity of pesticides sold, stated as quantity of active agents, has increased slightly since 2015. This does not change the health risk much, but represents a slight increase in environmental risk.

The consumption of pharmaceuticals is low in land animals. The livestock industry accounts for less than 10% of the country’s total consumption. At present, bacteria findings and monitoring
of resistance in Norway shows that the transfer of resistance from livestock holdings to the Norwegian population is marginal. It must be a goal to maintain this situation.

The total number of enterprises engaged in organic production has increased, and there are indications that this trend will continue. Experience from supervisory activities show that there are still shortcomings in the enterprises’ internal control, particularly when it comes to documentation of procedures.

All production of food of animal origin produces trimmings and waste that cannot be used for food, but nevertheless are a resource. The use of such material can result in contaminants or infective agents being introduced into the food chain through food packaging, fertiliser or feed. Many enterprises still do not handle such material properly. The regulations are complicated, and we are working to simplify them and provide adapted guidance to make it easier to comply with them.

In our assessment, the overall goal achievement in this area is not fully satisfactory.

**Strategic measures and priorities for the time ahead**

It will be important to follow up the use of pesticides and pharmaceuticals in the aquaculture industry to prevent unsafe and unnecessary use.

We will follow up the Government’s National Strategy against Antibiotic Resistance in our areas of responsibility. Even though animals in Norway are given little medication, the consumption should be further reduced, and we will work to ensure proper use of medicine.

The decrease in the number of agriculture enterprises engaged in organic production has ended, and the trend seems to indicate a further increase in the time ahead. We will follow up the official control tasks delegated to Debio to ensure that the products placed on the market meet the regulatory requirements.

Rapid development is taking place in the utilisation of resources such as by-products and waste for other purposes and development of new forms of food sales. This and the growing need to reduce food waste challenge our work to ensure that food safety is addressed.

**ENVIRONMENTALLY FRIENDLY PRODUCTION AND FACTORS THAT IMPACT THE ENVIRONMENT**

In this chapter we deal with issues relating to environmentally friendly production, such as the use of pharmaceuticals and pesticides, how salmon farming affects wild fish, and organic production.

The use of pharmaceuticals to combat salmon lice decreased significantly compared with 2015. The main reasons for this is resistance to the delousing agents, the use of mechanical methods and our efforts. Wild salmonids along much of the coast of Western Norway and parts of the coast of Central Norway are still exposed to high salmon lice pressure, which could have a negative effect on stocks. There is still a need to raise awareness of correct use of pesticides and provide guidance on sustainable use.

**Use of pharmaceuticals in farmed salmon**

**Goal:** The use of pharmaceuticals in the aquaculture industry shall be satisfactory in relation to food safety, fish welfare, environmental considerations and development of resistance.

**Results:** The use of antibiotics in the Norwegian aquaculture industry has been exceptionally low for many years, while the use of pharmaceuticals to combat salmon lice has been high. Figures from the Norwegian Institute of Public Health show a significant decrease compared with 2015. The use of all delousing agents other than chitin synthesis inhibitors decreased. The consumption of this agent increased because it was used on bigger fish, which requires higher
dosages. The decrease is a positive development, but consumption remains high. The use of pharmaceuticals has largely been replaced by non-pharmacological methods. These methods are far more environmentally friendly, but have a negative effect on fish welfare.

We have worked to reduce the use of delousing agents. We are carrying out a control campaign targeting pharmaceuticals in the aquaculture industry that aims to make the use of pharmaceuticals in the aquaculture industry satisfactory in relation to food safety, fish welfare, the environment and development of resistance. During the year, we have provided a lot of guidance and carried out supervisory activities in relation to fish farmers and fish health personnel. Preliminary results show that the use of several agents together, known as combination treatments, was significantly reduced. In addition, information and guidance has resulted in a more correct, and in many cases also reduced, use. The campaign will be concluded in 2017.

Challenges: It remains a challenge to ensure satisfactory use of pharmaceuticals and reduce the development of resistance in an aquaculture industry that is expected to grow.

Plans: The control campaign targeting pharmaceuticals in the aquaculture industry will be concluded in 2017, and we will consider what measures to take once the results become available.

The effect of salmon lice from the aquaculture industry on wild salmonids

Goal: To reduce the infection pressure of salmon lice from the aquaculture industry on wild salmonids and increase knowledge about infection pressure.

Results: Salmon lice in aquaculture facilities can have a negative impact on wild salmonids. The Norwegian Institute of Marine Research’s monitoring of salmon lice on wild salmonids showed that migrating salmon smolt were subjected to a high overall salmon lice infection pressure along much of the coast of Western Norway and parts of the coast of Central Norway in 2016. The general infection pressure in Northern Norway was low during the same period. It is probable that salmon lice from the aquaculture industry had a negative effect on salmon smolt from the affected areas. There was a general increase in salmon lice observations on sea trout and Arctic char during the summer along most of the coast of Norway. It is probable that salmon lice had a negative effect on feeding sea trout and Arctic char along most of the coast of Norway.

Challenges: The salmon lice infection pressure from the aquaculture industry on wild salmonids remains too high at some times and in some areas in Norway.
**Plans:** We will continue our work to reduce the salmon lice infection pressure from the aquaculture industry on wild salmonids. Our monitoring programme will be continued and developed.

**Use of pharmaceuticals on land animals**

**Goal:** The amount of medicine used for land animals shall be reduced further by means of, among other things, good infection hygiene and other preventive measures.

**Results:** The Government’s National Strategy against Antibiotic Resistance will be followed up within our areas of responsibility. Only one tenth of all antibiotics consumed in Norway is administered to animals, but this consumption should be reduced further, and we will ensure the appropriate use of medicines. We are cooperating with the Norwegian Medicines Agency on therapy recommendations and with the Norwegian Veterinary Association to develop prescription profiles for veterinaries and fish health biologists. The Veterinary Medicines Register (VetReg), which receives 1.8 million prescriptions for animals each year, is becoming a good supervision and guidance tool.

The livestock industry organisations are making considerable efforts to prevent illness and reduce the use of medicine both through knowledge and measures. Among other things, the prevalence of relatively common viral infections in cattle that result in some use of antibiotics is mapped. The infections in question are Bovine Respiratory Syncytial Virus (BRSV – infectious cough) and Bovine coronavirus (BCoV – infectious diarrhoea).

**Challenges:** Antibiotic resistance is a public health problem. The use of medication for animals shall be reduced by means of preventive measures and more correct use of medication in connection with illness. Animal health personnel are responsible for prescribing medication and will be followed up with advice, new tools and our official control.

**Plans:** Expanded use of the veterinary medicines register (VetReg) has been planned for 2017. We shall ensure that we have overviews for use in our supervisory activities and national and international reporting. The plan is to give practising veterinarians access to information about their own prescription profile compared with those of other veterinarians and use this as an awareness-raising tool in the work to promote a more correct use of medicines. General information to the public about when antibiotic treatment is not beneficial will coincide with the human medicine information measures. In collaboration with the Norwegian Medicines Agency, the Norwegian Veterinary Association and the Norwegian University of Life Sciences (NMBU) we will develop e-learning courses for veterinarians on the use of antibiotics and update therapy recommendations for animals.

**Pesticides**

**Goal:** Pesticides shall contribute to good crops and do as little harm as possible to health and the environment.

**Results:** Sales statistics for pesticides show that the quantity of pesticides sold, stated as quantity of active agents, has increased slightly from 2015 to 2016. This does not change the health risk much. The environmental risk has increased by 8%, and several factors have contributed to this increase. The most important individual factor is that the active agent bixafen has been approved for use. Bixafen is important to prevent the development of resistance in fungal diseases that affect cereals, since its mechanism of action differs from those of other approved fungicides.

The table below shows the development of risk, based on sales figures, for separate risk indicators for health and the environment. The average for 1996 and 1997 has been used as the baseline, corresponding to 100 per cent. Sales have varied considerably since then, which is primarily due to periodic stockpiling as a result of increased taxes and price fluctuations on the world market. It is therefore difficult to be specific about the short-term risk development.
The pesticides regulations were amended in 2015. After just one year we can already see that the regulatory amendment has had an effect by raising awareness among both users and distributors of pesticides. This is also true of areas where the old rules were upheld. Private individuals have also become more aware of pesticides, which has given rise to an increasing number of reports of concern regarding suspected unlawful use of pesticides.

The monitoring programmes for pesticide residues in foodstuffs and ornamental plants uncovered unlawful use of pesticides in strawberries, apples and ornamental plants. For a while, we have not carried out many supervisory activities in relation to ornamental plants, and we now see that we must prioritise this area to achieve good compliance with the regulations. See section 3.2.2 Contaminants for more details on pesticide residues in foodstuffs.

On assignment from the Ministry of Food and Agriculture, the NFSA has taken part in the work to prepare a new action plan for sustainable use of pesticides. The work of following up the action plan is well under way, and has included:

- An authorisation course in using pesticides that helps to ensure that professional pesticide users have the right competence. More than 1,400 people passed the web-based renewal course in 2016. Important topics covered included integrated pest management, health and environmental consequences and correct use of pesticides.
- We have prepared a guide to the new pesticide regulations. The guide is aimed at people who use, produce, import or sell pesticides.

**Challenges:** Pesticides are used in the agriculture industry to combat weeds, fungi and pests. However, growing attention to the negative aspects of pesticide use is a trend in today’s society. It is a challenge to combine the farmers’ need for pesticides with consumers’ wish for their use to be limited.

**Plans:** We will focus on correct use of pesticides through both control campaigns and monitoring programmes. We will continue our work to raise users’ awareness by launching a web-based foundation course for professional pesticide users.

**Organic production**

**Goal:** Products sold as organic on the Norwegian market shall meet the requirements that apply to organic production.

**Results:** The NFSA has delegated to Debio the authority to carry out official control in relation to enterprises engaged in organic production. Debio carries out supervisory activities annually in relation to all enterprises that are members of the certification scheme. Documentation of how...
the production is carried out forms an important basis for the official control of organic production. The results from supervisory activities show that most enterprises have good quality system and documentation procedures in place, but there are also enterprises that face challenges when it comes to providing sufficient documentation.

We conducted an audit that showed that Debio has good procedures and a sound system for quality assurance. However, Debio lacked procedures describing requirements for closing nonconformities in the enterprises. Inadequate follow-up by the supervisory authority can, at worst, result in products that do not meet the regulatory requirements reaching the market. Debio has initiated sufficient measures to improve its nonconformity management.

**Challenges:** In 2017 we expect to see an increase in the number of agricultural enterprises that are members of the certification scheme for organic production for the first year in a long time.

**Plans:** Official control of organic production must be adapted to the new regulations on organic production that will be incorporated into the EEA Agreement in 2017. Debio is working to develop official control of organic production to make it more risk-based and targeted.

### SUSTAINABLE UTILISATION OF RESOURCES

All production of food of animal origin produces trimmings and waste that cannot be used for food, but nevertheless are a resource. The use of such material can result in contaminants or infective agents being introduced into the food chain through food packaging, fertiliser or feed. Many enterprises still do not handle such material properly. The regulations are complicated, and we are working to simplify them and provide adapted guidance to make it easier to comply with them. Reuse of animal by-products and waste shall not entail a risk to human or animal health.

#### Animal by-products

**Goal:** All enterprises shall have control of their by-products through their internal control system, and their knowledge about the value of and hazards associated with use of by-products shall be improved.

**Results:** It is a challenge, both for the industry and for the NFSA, to know what constitutes by-products and how they are to be handled. The NFSA has prepared guidance tables that the industry can use to categorise by-products in fish enterprises and land animal slaughterhouses where animal by-products arise. The by-product regulations ensure that safe raw materials of animal origin enter the food chain for use as feed and fertiliser. The EU by-product regulations were finally adopted in Norway in 2016. Since then, we have prioritised implementing the new legislation for the Lovdata website and the MATS system and preparing for supervisory activities. We have carried out a total of 1,143 supervisory activities pursuant to provisions of the by-product regulations. Only 137 of the supervisory visits were to enterprises approved or registered for by-products. This illustrates how the by-product regulations influence primary production, food production, feed production, fertiliser production, food service, ports, airports etc.

**Challenges:** By-products occur at most stages of the value chain. Many enterprises still do not handle animal by-products and derived products correctly. It is a challenge for the NFSA to facilitate safe use of by-products by raising awareness in business and industry as well as through our own official control. A stronger awareness is needed that the by-product regulations are the gateway to safe introduction of material of animal origin into the food chain for use as feed and fertiliser. We will continue our efforts to improve guidance and contact with the industry in the by-product area.

**Plans:** We will carry out supervisory activities in relation to capture-based aquaculture and in parts of the food production industry. We will also continue to target by-products in wild fish landing facilities, fish and land animal slaughterhouses and processing plants. We will focus on

### FACTS

An animal by-product is the part of an animal, fish or food that is no longer intended for use as food.

By-products are categorised by risk to human and animal health. Most of the by-products fall into category 3, the low-risk category, for use in feed for food-producing animals.
follow-up of traceability requirements in particular. We will also develop better systems for risk-based control of enterprises that handle by-products.

**Recycling of waste**

**Goal:** We shall facilitate the use of waste-based fertilisers and by-products while safeguarding health and environmental considerations.

**Results:** Recycling of waste, also known as the circular economy, may entail a risk of contaminants or infective agents being introduced into the food chain through food packaging, fertiliser or feed. Waste contains resources that can be reused as fertiliser or soil improver in food production or parks and gardens. Norway has a long-standing tradition of using compost and sewage sludge as soil improvers. Many enterprises are seeking innovative solutions for making fertiliser products, and we see a development towards more types of waste being used for this purpose. The use of waste as a raw material in fertiliser production requires good control of environmental toxins and infective agents. The results from supervisory activities in 2016 identified several shortcomings in control of heavy metal content and other risks, and this shows that close follow-up of the production of waste-based fertilisers will remain necessary in the years to come.

Both the national regulations and the EU regulations for fertilisers are under revision. It is an important goal to facilitate the use of waste-based fertilisers while safeguarding health and environmental considerations. Norway is working to uphold strict requirements regarding cadmium in fertiliser. Sampling of mineral fertilizer indicates that the cadmium content is higher than it was 15 years ago, but still well below what is considered the limit for safe levels.

**Challenges:** Increasing recycling of waste can entail a risk of contaminants or infective agents being introduced into the food chain through food packaging, fertiliser or feed.

![Circular economy – recycling waste](image)

**Plans:** We will continue our official control of fertiliser based on waste and sewage sludge. We will carry out a monitoring and mapping programme to examine the occurrence of Salmonella and resistance to antimicrobial agents in organic fertiliser and growing media sold on the non-commercial market.
Food waste

Goal: We shall contribute to reducing food waste by providing information about the opportunities to reduce food waste that the current regulations provide and help to make the regulations even less of an obstacle to food waste reduction.

Results: Among other things, the NFSA has participated in the measures group under the memorandum of understanding between the authorities and the food industry on reduction of food waste. It is becoming clear in the course of this work that neither the regulatory framework nor the way in which it is practised by the NFSA constitutes a significant obstacle to the reduction of food waste. The industry's logistics and labelling procedures are far more important factors. It is primarily by providing information about the regulations and the opportunities they provide that the NFSA can contribute to reducing food waste.

Challenges: Neither the food industry nor consumers know enough about the regulations governing date labelling or about how to reduce food waste. The regulations can be improved further to make it easier to reduce food waste.

Plans: In our work to reduce food waste, we will place emphasis on providing information about the opportunities that the regulations provide and also work to ensure that future regulations are even better adapted to facilitating the reduction of food waste.
MARKET ACCESS

We ensure that Norwegian products have access to markets all over the world. This work is made more difficult and demanding by an increasing number of additional and special requirements made by different importing countries.

Goals

To contribute to Norwegian goods having access to markets all over the world.

- Markets shall have confidence in the Norwegian food administration.
- We shall have agreements with other countries that ensure the export of Norwegian goods.
- Our system for issuing certificates shall ensure that the flow of goods is safe and simple.

Results

We consider goal achievement to be good. Norway is a big exporter of many different products, particularly seafood. Norway is the world’s second biggest exporter of seafood, which it exports to 143 countries. Most of Norway’s export takes place without complications.

Negotiations/new markets and products

Export to new markets or exporting new products to known markets always require an extra effort to reach agreement on certificates and requirements. In the seafood area, for example, we succeeded in gaining access to the South Korean market for export of cod products after the South Korean audit of us, and Vietnam has permitted imports of live red king crab from Norway.

In the area of land-based products, we succeeded in gaining access to the Japanese market for export of beef offal. Norwegian reproductive material is in high demand globally, and these products are important to breeding healthy animals. We reached agreement with Iceland on certification of cattle embryos and with the USA on pig semen. They are both new markets for such products.

Official control/issuing certificates

Under the EEA Agreement seafood is exported unhindered and with no need for certificates to the EU, which is the biggest market for Norwegian seafood. We issued just over 53,000 certificates for export to countries outside the EEA area. Of these certificates, 48,000 were for seafood and 5,000 for land-based products. The number of export certificates issued has remained stable in recent years.

The situation was challenging for Norwegian producers of organic products that trade with the EU – particularly for producers of Norwegian organic salmon. Norwegian organic products were not accepted because Norway has not incorporated updated EU regulations in the field of organic production. The reason for the delay was that negotiations with the EU took time because both Norway and Iceland wanted adaptations to the regulations. We have prepared national regulations for organic aquaculture in order to facilitate sale of Norwegian organic salmon, but the European Commission did not accept the regulations. This problem will be solved this year, since a new regulatory framework for organic production will come into force in Norway in early 2017.

Maintaining market access is an important task for the NFSA. Seafood exports to Belarus have increased considerably since Russia introduced an import ban in 2014. Processed Belarusian seafood based on Norwegian raw materials can be exported freely from Belarus to Russia. We have therefore put a lot of effort into maintaining a good relationship with the Belarusian authorities.

The campaigns targeting batches for export were not carried out in 2016 as planned because we gave the export project priority. We consider the export project to be our most important

FACTS

This is how the NFSA works to ensure market access:

Negotiations/new markets: We negotiate with importing countries about what we should certify.

Official control/issuing certificates: We carry out supervisory activities and run monitoring programmes to document the situation. We also issue certificates in connection with export.

Visits/Inspections from other countries: Other countries’ food safety authorities visit and inspect Norwegian enterprises and the NFSA’s official control system and work to ensure that agreements are observed.
development project in the seafood area, and this project is our priority, along with operational tasks and visits from other countries’ authorities.

Visits/inspections from other countries
We received several official delegations, including from South Korea, Japan and Taiwan, to demonstrate and document that Norway has a good official control system. The results from the visits and inspections were good.

Challenges
Individual countries introduce new special requirements all the time, and this causes a lot of extra work both for us and for the exporters. Moreover, it often entails uncertainty or suspension of export. The Chinese market is one that we have worked a lot with. We have registered Norwegian enterprises in a new Chinese electronic registration system, without market access having improved as a result. In recent years, we have put a lot of effort into work in relation to China and Russia, despite limited access to both these markets.

Norway is a big seafood nation, but a small player in international politics. This means that we constantly have to adapt to the demands of other countries. The trend is that requirements are becoming more and more wide-ranging and that several countries are introducing their own list systems. We are also vulnerable to political conflicts between countries that can cause uncertainty or suspension in certain markets.

Our portfolio comprises 200 different export documents, and the number is growing. It is becoming more complicated for exporters to use and for us to maintain. It is also difficult for exporters and for the NFSA to relate to many different other countries’ regulations. However, this is a trend that we cannot stop, but will have to find solutions to adapt to.

Seafood exports are in rapid development with short deadlines. It is challenging to meet expectations of a high level of service, increased availability and new technological solutions adapted to exports, whose logistics are often time-critical and where a lot of activity takes place outside of ordinary office hours.

Plans for the future
The export project is the most important development project that we are working on and will mean a lot to us as well as to exporters in future. The objective of the project is to develop an efficient certification and official control system that other countries trust and that safeguards the most important Norwegian export interests. We are working on three concrete sub-projects:

1. issuing certificates with an electronic security solution
2. more efficient control
3. linking the issuing of certificates to results from supervisory activities in order to be able to offer certificates also outside the NFSA’s ordinary office hours.

Business and industry, and the seafood industry in particular, have been involved in and informed about the project concept.

We will promote clearer prioritisation of which markets are the most important ones that we will devote the most attention to. This prioritisation must take place in cooperation with business and industry and the ministries. Two of the key markets from 2017 is the Brazilian and the Chinese markets. The latter is the reason for particular anticipation and expectation since the diplomatic relations between Norway and China have been normalised. Nevertheless, the work will take a long time.

In order to get certificate negotiations started at an early stage and have export certificates with the correct content ready for exporters as early as possible, we will cooperate more with the industry, the industry organisations, ministries and the authorities of other countries.
CONTINGENCY

We have handled several incidents in a good manner while we are also making determined efforts to strengthen our emergency preparedness. This requires continued regular training and flexibility in the organisation.

Goals

We shall have robust emergency preparedness in place that is adapted to a changing world. Safety and contingency work shall be an integral part of the NFSA’s activities.

Results

Incidents and exercises

There were no major national incidents in 2016. However, we continuously handled incidents of various scopes in most areas. We dealt with 646 suspected cases of plant, animal and fish diseases, of which 445 were confirmed. These incidents provide opportunities for us to test our emergency preparedness. Experience from these incidents and the exercises held indicates that we are a good contingency organisation, but that we still have a potential for improvement. In particular, we need a good incident management tool to enable us to communicate a situation quickly. We cooperate well with the municipal health service, the knowledge support institutions, other agencies and business and industry to combat outbreaks. We have conducted a review of our contingency organisation as a basis for further development and improvement.

Some of the biggest incidents were handling chronic wasting disease in cervids, the finding of flu infection at the top level of the turkey breeding pyramid, and the outbreaks of ISA in the Northern region.

We conducted six regional exercises in 2016. The regions cooperate on these exercises and involve the head office in order to maximise the learning effect of the exercises. This is the reason why we held fewer exercises in 2016 than in previous years. Competence-raising measures are also increasingly organised in advance of exercises. Moreover, the NFSA contributes actively in preparations for and implementation of exercises held by our owner ministries and the county governors.

Developing emergency preparedness and cooperating with other parties

We have carried out an internal audit in the animal health area focusing on emergency preparedness. The purpose of this was to examine whether internal and external requirements that apply to contingency planning are met and whether the points for improvement identified during contingency exercises are followed up. We have several improvement areas, including emergency preparedness equipment, governing documents and internal control.

The tool CIM was acquired in order to improve the organisation’s incident management. This tool is intended to ensure better log-keeping, information flow and understanding of the situation throughout the organisation. The reporting system for food-borne outbreaks (VESUV), which is used by the NFSA and the district medical officers, was also launched in CIM with better adapted information flow.

In order to improve its emergency preparedness in the field, the NFSA has introduced the Nødnett emergency communication network in all regions and for its cleaning and disinfection teams. The Norwegian Civil Defence’s central level and the NFSA are cooperating on a joint national agreement that will strengthen the existing regional cooperation between the NFSA’s regions and the civil defence districts. In order to ensure biosecurity in the field, the NFSA’s epizootic team has prepared a comprehensive field manual that will also be used to teach veterinary students.

The NFSA and relevant parts of the Norwegian Armed Forces have entered into an active collaboration to prepare for the big NATO exercise in 2018. We see that we can help the Armed
Forces with map data and intensified official control at the border, in food production enterprises and in relation to drinking water, among other things. Our cooperation has shown that the security and contingency work must be seen in conjunction with each other so that we can communicate effectively via a classified network. These preparations also serve as training in cooperation between the different civilian agencies that is otherwise not highlighted in civilian exercises.

The preparedness laboratories for measuring radioactivity in food have become operational during the year. Measurements are carried out of local food and meat in accordance with the strategy for managing radioactivity in food and feed.

The Norwegian Radiation Protection Authority and the NFSA held a seminar in November entitled En jobb å gjøre – kommunikasjon ved atomhendelser (‘A job to do – communication in connection with nuclear incidents’). The seminar was attended by more than 300 participants from business and industry and the authorities, representing both the regional and central level. The topic attracted great interest, and new possibilities for communication were elucidated by the police and municipalities.

We have also contributed to various reports under the auspices of the Ministry of Health and Care Services, the Norwegian Directorate of Health and the Norwegian Directorate for Civil Protection.

Challenges
The scope and complexity of incidents have increased. The growth in the import of plants, foodstuff and pets increases the risk of serious incidents. Outbreaks can have significant financial consequences, and extensive measures may be required to combat them. It is demanding for us to develop our emergency preparedness, ensure sufficient flexibility in the organisation and hold enough exercises to be prepared to deal with this reality.

Plans for the future
We will continue our targeted efforts to develop the organisation’s emergency preparedness. Contingency exercises shall be a priority for all staff. We will emphasise good integration of contingency planning in our official control work through systematic training involving all entities and most activities throughout the year. Personnel in key roles shall be appointed in advance and receive training. In addition, we will make training in how to use the incident management tool CIM a priority to ensure optimum effect during incidents.
WORK METHODS AND MEASURES

The NFSA’s four core processes describe the activities we carry out to ensure that food is safe and animal welfare safeguarded:

- Gathering knowledge and analysing status
- Development of regulations
- Supervision
- Communication and guidance

The NFSA’s influence on the effect goals, the societal effects, is indirect in that our activities influence the behaviour of parties that we e.g. carry out supervisory activities in relation to or communicate with. Which activities we emphasise depends on the industry, enterprise and risks in question, and we often use combinations of activities. Our goal is to work in an efficient and targeted manner to achieve the greatest effect possible.

GATHERING KNOWLEDGE AND ANALYSING STATUS

Our priorities and decisions are increasingly based on knowledge obtained from our own activities, supervision objects, knowledge support institutions and research. The challenges facing us are to improve data quality and utilise the available data.

Goals

We shall have good knowledge about the status, developments and trends in our areas of responsibility.

- Our risk management and administrative regime shall be evidence-based and research-based.
- We shall implement targeted and cost-effective monitoring, control and mapping programmes that follow from international agreements or Norwegian additional guarantees, among other things.
- Our own data shall be of high quality and shall be made publicly available.
- We shall use more relevant data from more sources and advice from the knowledge support institutions as a basis for our priorities.
- Evaluation is a method that constitutes an important tool for obtaining knowledge.

Results

Cooperation with the Norwegian Scientific Committee for Food Safety (VKM) and the knowledge support institutions provide a good knowledge base. The knowledge institutions provide professional advice and assessments vis-à-vis both our strategy choices and our day-to-day administration. They are important contributors to our contingency work, both to our choice of measures and communication of risks. VKM is unique in that it brings together expertise from different expert communities to assess wide-ranging issues.

In April 2016, chronic wasting disease (CWD) was detected in Europe for the first time, in three reindeer and two moose in Norway. Swift action was needed, but our knowledge base was inadequate. The Norwegian Environment Agency and the NFSA jointly commissioned a risk assessment from VKM, and a preliminary report was submitted after six weeks, in June 2016. A more comprehensive report will be available in March 2017. VKM has assessed whether CWD represents a threat to human health. The conclusion was that there is currently no research results to indicate that humans can be infected with CWD from eating meat from infected cervids. VKM has also identified proposed monitoring measures and recommended precautions to prevent the disease from spreading. VKM and EFSA have cooperated closely on the CWD risk assessment. This is one example of how VKM and the individual knowledge support institutions have worked together.

FACTS

The NFSA has knowledge support agreements with the following entities:

- The Norwegian Veterinary Institute
- The Norwegian Institute of Public Health
- The Norwegian Institute of Bioeconomy Research (NIBIO)
- The National Institute of Nutrition and Seafood Research (NIFES)
- The Norwegian Institute of Marine Research
- The Norwegian University of Life Sciences (NMBU)
lay the groundwork for the NFSA’s handling of a situation in the form of further mapping and measures such as regulations, information etc.

During 2015 and 2016 VKM has, on assignment from the NFSA, carried out risk assessments of several different substances used in food supplements. They have also calculated the population’s intake of selected vitamins from their diet and from food supplements. We use these assessments in our development of regulations for food supplements and to stipulate maximum limits.

The results of the monitoring programmes provide important knowledge

The MC programmes show status and trends for contaminants, infective agents or toxins found in food, drink or live animals. The programmes are continuously rationalised and adjusted every year to adapt to changes in the risk situation. We must ensure that we have freedom to prioritise in our mapping of new threats.

The NFSA carried out 77 different programmes in 2016. We have continued our mapping of bacteria resistant to antibiotics in livestock production (MRSA), while our analysis activity to document seafood and bivalve mollusc health has been strengthened. We have maintained our efforts to map new serious infectious fish diseases and monitor the fish health area. In the plant area we have intensified our efforts to prevent the introduction of serious plant pests. Over the past year, more programmes have been aimed at uncovering food crime, while the control work in relation to various food supplements has continued.

We have chosen a new analysis provider for the contaminant programme for land animals. Negotiations resulted in a favourable agreement with Fera Science Ltd. in England. It is an important piece of news that this contract also includes the function of national reference laboratory (NRL) for all analyses in the contaminant programme.

The figure shows analysis costs for the period 2014–2016. The total analysis costs have been kept down, and we are also working to adjust and target our analysis activities in relation to the risk situation. The total 2016 analysis costs for the MC programmes was approx. NOK 95 million.

![Analysis costs in MC programmes, broken down by area](image)

Priorities in the MC programmes have been determined in consultation with the knowledge support institutions and discussed with the industries in strategic expert forums.

The NFSA continues its good cooperation with the Research Council of Norway. We are particularly concerned with research that can give us a better understanding of the effects of our administrative regime. The NFSA needs research that sheds light on effect mechanisms, such as what promotes or hinders goal achievement in the various administrative areas. The Research
Council of Norway announced two calls for applications in consultation with the NFSA in 2016. Funding was granted for the projects ‘Effects of the Regulatory Framework on Fish Welfare and Health’ and ‘Plantvalue (Valuation of the Norwegian plant health regime from an environmental, economic and social perspective)’. The Research Council of Norway has previously allocated funding to the project ANIWEL (Realization of animal welfare goals in Norway’s food sector).

**Challenges**

Evidence-based practice requires long-term efforts. Both societal effects and user effects are influenced by factors over which the NFSA does not have complete control. It is nevertheless important to develop methods for documenting the effects of our work. Knowledge about the effects of what we do will form the basis for further development of methods, work processes and priorities. We must emphasise using both our own and external data, and we must have better tools for analysing our data and exchanging data with others. In our experience, this work requires knowledge about the possibilities inherent in multiple sets of data and digitalisation. Making our decisions more evidence-based is a long-term goal.

Regulatory development work shall be based on scientific assessments, and we want to contribute more Norwegian data to the EU’s risk assessments and have access to data from the EU. This concerns both data we obtain through our own mapping efforts and data from business and industry in Norway. There is a need to strengthen our own work to gather data as well as our cooperation with business and industry to obtain relevant data. There is also a need to strengthen work with the reporting systems in relation to the EU/EFSA so that Norwegian data can be used in the EU’s risk assessment work.

**Plans**

We will obtain new knowledge with a bearing on our social mission, and we will:

- increase our knowledge about tracing and analysing connections
- obtain more knowledge about contaminants, infective agents and additives in food
- continue work to develop our ability to process information and improve the quality of data, and to make data generated by our monitoring and control programmes more easily available
- carry out pilot projects for exchange of data with other agencies and enterprises
- carry out pilot projects to test methods for measuring the effect of supervisory activities
- carry out an evaluation of the smiley inspection scheme, an important part of which will be a user survey among enterprises and consumers
- follow up the requirements specified in the Ministry of Local Government and Modernisation’s digitalisation circular by considering a concept for ‘data to and from the NFSA’
- carry out the projects sampling, rationalisation of export certificates and meat control.

**DEVELOPMENT OF REGULATIONS AND INTERNATIONAL WORK**

Regulatory development work takes place on a continuous basis, and EEA regulations make up the quantitatively largest share by far. As a result of the EEA Agreement, the NFSA is playing an active role in work on EU regulations. The regulations are incorporated into the EEA Agreement and then implemented in Norwegian national regulations. This is extensive and demanding work, but our goal achievement is good in terms of implementation of EU regulations in Norwegian law.

**Goals**

The regulatory framework that we are charged with administrating deals with all aspects of the food chain from field and fjord to the table. The NFSA’s regulatory development work shall help to achieve our effect goals. Good regulations are important in order to make it easy for
enterprises to comply with the regulations and easy for the NFSA to carry out supervisory activities pursuant to them. The regulations should be easy to understand and simple to use, and the NFSA shall contribute to renewing, simplifying and improving the regulatory framework.

It is important for Norway to keep abreast of new proposed regulations under development in the EU at an early stage. The NFSA must be an active participant in relevant expert and working groups and committees where new regulations are discussed and endorsed. The NFSA shall safeguard Norway's interests, clearly communicate Norway's positions and inform business and industry as well as the general public about new regulations.

We shall participate in the development of international standards and safeguard Norway's interests in the UN Food Standards Programme (Codex), the World Organisation for Animal Health (OIE) and the International Plant Protection Convention (IPPC).

The goal of our work in the OIE is to raise the level of measures to prevent and combat animal diseases, promote animal welfare and global knowledge of aquaculture, and work to promote reasonable and predictable conditions for Norwegian exports. It is an important goal for our work in the OIE to reduce the amount of antibiotics administered to animals globally.

Results

We have followed the regulatory work in the EU closely, and there is no significant backlog in the implementation in Norwegian law. The NFSA's overall goal achievement is good when it comes to implementing acts of Community law within the stipulated deadlines. Of the EEA regulations, 73% were implemented within the deadline, and this is about the same as in previous years. Five national regulations have been simplified with clearer language, better structure and a clearer legal basis for requirements. Several of the national regulations represent implementation of EU regulations that we cannot make adjustments to. Appendix 1 contains regulatory development figures. We have worked to develop better indicators for development of regulations, and they will apply from 2017.

We hold weekly coordination meetings with the ministries to prepare for the meetings in Brussels. Work to further develop, harmonise and rationalise the EEA work is under way in close and good dialogue with the ministries.

Particularly extensive work worth mentioning includes work on the new official feed and food controls regulation and the new comprehensive EU animal health legislation:

- The political consideration of the new official food and feed controls regulation was completed in June 2016. The formal adoption of the new regulation (in March/April 2017) is expected to result in a lot of follow-up work.
- The EU has adopted a new Animal Health Law (Regulation (EU) 2016/429 – Animal Health Law (AHL)). It entered into force on 21 April 2016, but its provisions will not take effect until 21 April 2021. Implementing this law into Norwegian law will entail a lot of work.

Other international arenas

We established a dedicated coordinator function for international work during the year. The purpose of this was to ensure a more uniform approach to Norway's positions on important matters such as antibiotic resistance and to the overall priorities in our international work. Work has begun on a comprehensive long-term international plan for the period towards 2020.

The NFSA is Norway's Codex Contact Point. The contact point coordinates work on Norway's positions, follows ongoing work between meetings and ensures proper preparation for meetings. Norway has represented the European region in the Executive Committee of the Codex Alimentarius Commission since 2015. The NFSA has prioritised work in the horizontal committees, such as the committees on food hygiene, food additives, pesticides, contaminants and food labelling. The standard for fresh fruit and vegetables was completed in 2016. Through international dialogue we reached an agreement to remove the use of antimicrobial agents from
the standard. We have also contributed data and points of view on the limit values for delousing agent residues in fish, limit values for mercury in fish, guidance to a questionnaire for use in import and export cases, and use of growth hormones in food production animals.

The NFSA has contributed to the development of several international standards in the plant health area through its participation in EPPO and the International Plant Protection Convention (IPPC). Norway's top priority topics have been standards for trade in wood, used agricultural equipment and monitoring of plant pests.

The NFSA has contributed to the development of international standards and safeguarded Norway's interests in the OIE. At the OIE's World Assembly of Delegates in 2016, Norway took over as chair of the pre-meeting for the Aquatic Code and Aquatic Manual. In cooperation with the Norwegian Medicines Agency we have contributed actively to OIE's work on the use of veterinary medicines. The most important topics were the development of antibiotic resistance and standards for regulation and proper use of pharmaceuticals. Important knowledge and experience in the form of best practice have been exchanged between developing countries and industrialised countries. The first unofficial report on antibiotics consumption based on data from the OIE's global database was published in 2016. Preliminary results show that many countries have inadequate regulation of veterinary medicines and high consumption of antibiotics.

**Norway works for strategic topics in Nordic meetings**

We have worked over time to improve the meetings of the Nordic Committee of Senior Officials for Fisheries and Aquaculture, Agriculture, Food and Forestry (EK-FJLS). The autumn meeting was the first meeting where we could see the effects of this work. Norway chairs the committee in 2017, and we continue our work to promote a strategic level in meetings in this period.

**Challenges**

Regulatory development work shall be based on scientific assessments, and we want to contribute more Norwegian data to the EU's risk assessments and have access to data from the EU. This concerns both data we obtain through our own mapping efforts and data from business and industry in Norway.

Regulatory development work must be continuously upheld and developed to ensure that the objectives of the regulatory framework are achieved to the greatest extent possible. The NFSA wants to further develop procedures for regulatory development work to support this goal.

**Plans**

The regulatory framework will be more related to the big picture. We will work actively to develop our regulations in accordance with the goals and principles of the Food Act, the Animal Welfare Act and the Act relating to Cosmetic Products and Body Care Products, etc. We will develop our ability to see the different sets of regulations in conjunction with each other, and development of regulations and international work will be linked to the NFSA's overall prioritisation processes. We will highlight the considerations underlying regulations. We will make more use of own data and experience from supervisory activities in our regulatory work. Regulations will be well-structured in order to make them easy to navigate. Work on a new EU animal health regulation and official food and feed controls regulation will help to achieve this.

We will include the minimum requirements stipulated in the Instructions for Official Studies and Reports in our development of regulations. We will also further develop the regulatory process and establish procedures to ensure that work is carried out as efficiently as possible.

The NFSA will contribute actively to Codex's work against antimicrobial resistance (AMR), and participation in the appointed working group will be given priority.

The NFSA will contribute to the development of international standards and safeguard Norway's interests in the OIE. We will continue to cooperate with the Norwegian Medicines Agency and
will participate actively in the OIE’s important work in relation to the use of antibiotics in animals. We will make active use of our national expert to support the OIE’s global aquaculture and fish health work and ensuring a good national framework for aquaculture production and export.

SUPERVISION

One important measure to achieve the NFSA’s overriding objective is to control enterprises’ regulatory compliance from the field and fjord to the table. We carry out simple spot check-based supervisory activities, more comprehensive supervisory activities, major audits or investigate reported data (‘supervision without boots’). The requirement to renew, simplify and improve means that we must develop our control methods in order to make increasingly efficient use of our resources. Digital solutions can provide new expedient tools.

Goals

The official control regime shall be efficient and uniform:

- The choice of method shall be based on risk assessments and the type of enterprise in question.
- We shall use more simplified and standardised reports concluded on site, as for the smiley inspection scheme.
- We shall use the necessary measures and escalate them.
- Enterprises and similar cases shall be treated in the same way.

Our control methods shall be effective. The use of measures in connection with violations of regulations shall be adapted to the risk situation, meaning that the measure used shall be proportional to the seriousness and extent of the violation. Most of our supervisory activities shall take place pursuant to an internal risk assessment. Our control methodology shall be developed, and team-based control campaigns or supervisory activities relating to chains/groups of companies shall be used. Our supervisory support systems (MATS and MARTA) shall be suitable for all types of supervisory activities and contribute data information to reports and analyses.

Results

Supervision production and uniformity

We carried out 72,889 supervisory activities. This includes inspections, audits, sample collection, document control in connection with import and export, and dealing with unexpected incidents. This represents an increase of about 7% compared with the preceding year. The main reason for this increase is the introduction of the smiley inspection scheme for enterprises in the food and beverage service industry. We consider goal achievement to be satisfactory.

Smiley inspections of enterprises in the food and beverage service industry were introduced in order to enable consumers to make more informed choices, among other things. It is also a goal to improve compliance with regulations. The inspectors feel that the methodology has contributed to achieving this. Efficiency has improved, particularly because the work is concluded on site. At the same time, we have had to reduce our supervisory activities in relation to other enterprises in the food industry somewhat.

Food in Norway is safe and, with a small number of exceptions, animal welfare is safeguarded. Our work to ensure food safety and animal welfare is based on strict requirements throughout the food chain, which means that we nevertheless find violations of the regulations. We found regulatory violations in 48% of the enterprises that were subjected to supervisory activities. This is a decrease of 4 percentage points compared with the previous year. Nonconformities are most frequently detected in the drinking water area (67%) and least frequently in connection with supervisory activities pursuant to the Animal Welfare Act (40%). The proportion of enterprises
where violations of regulations were identified has increased in all three areas of drinking water, animal welfare and fish health.

Calibration of supervisory activities and professional judgement through regional and interregional expert forums is perceived as very useful. The smallest variation between regions is found in the supervisory areas animal welfare and fish health, while variation is highest in the drinking water area.

We used formal measures in relation to about 95% of the enterprises where we found violations of regulations. Decisions to issue orders were most often made in the supervisory areas drinking water and fish health (in relation to 98% of the enterprises where violations of regulations were found), and somewhat less often in the animal welfare area (in relation to 93% of the enterprises where violations of regulations were found). There is little variation between regions in terms of use of measures. Appropriate use of measures is important, and we have held courses/experience transfer seminars for approx. 200 employees on the topic.

**Appeal cases and their consideration**

The head office is the appellate body for all decisions made by the NFSA. Appeal processing provides experience in applying the regulations and using guidance material that will be useful when regulations are changed or developed. Appeal cases are also important in order to ensure that similar cases are treated in the same way.

We received 310 appeal cases, which is a marked increase compared with the 250 appeals received in 2015. We see an increase in the proportion of decisions in the first instance that are reversed by head office. The proportion has increased from 13% in 2015 to 19% in 2016.

**Cases reported to the police and legal proceedings**

Seventy-nine cases were reported to the police in 2016. Of the cases reported, 40 concerned punishable violations of the Food Act and 29 concerned violations of the Animal Welfare Act. In three cases, violations of both acts have been reported. Several cases concern illegal import of pets, one concern illegal import of plants, and seven concern threats against and/or harassment of supervisory personnel. The number of reports of violations of the Food Act has increased, particularly because more cases of illegal import of animals are reported.

A small number of cases were dropped or settled with a fine, but most of the cases reported to the police in 2016 are under investigation or have been submitted for a decision on whether or not to prosecute. Fines were imposed in nine cases.

Six rulings were made following petitions for preliminary injunctions, and six judgments pronounced following legal action. The purpose of the injunctions is to prevent the NFSA from implementing its decisions. Two rulings concerned the Food Act, three the Animal Welfare Act and one both acts. One of the injunctions was considered by two courts. Three judgments
concern the Animal Welfare Act, one the Food Act, one both acts and one the Act relating to Animal Health Personnel.

The courts did not find in favour of the plaintiff in any of the cases. Another three notices of proceedings and one appeal against a ruling and judgment are under consideration. We see that the number of civil lawsuits is increasing. It is difficult to say why this is, but trends in society at large also affect us. The people we make decisions in relation to make use of their rights and do not resign themselves to instructions from the public authorities to the same extent as before.

Twenty-two criminal cases have been decided, of which 18 concerned violation of the Animal Welfare Act and two violation of the Food Act. One case concerned violations of both acts. Six of the cases have been considered by more than one court, and two even by the Supreme Court. Three cases concerning violations of the Animal Welfare Act ended in acquittal. The Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime (Økokrim) has appealed one of the cases. In the other cases, the convicted persons were sentenced to prison, and bans on keeping animals were imposed in nine cases.

Animal crime
Two meetings between the NFSA and the police have taken place at central level as part of the follow-up of the central collaboration agreement from 2015 on reinforced collaboration to combat animal crime (animal police). Another competence-raising event has been planned for police and inspectors under the auspices of the NFSA and Økokrim.

The regions have had meetings with the police districts in several locations to improve local cooperation. In some places, the police have not assigned responsibility for environmental crime since its restructuring, and consequently no meetings have been held here. The matter is being followed up.

The two regional pilot projects intended to contribute to good procedures and cooperation between the NFSA and the police in cases involving animal crime are well under way, one in the Central region and one in the Southern and Western region (since 2016). This work also involves participating in external meetings and giving talks. Generally speaking, the NFSA is of the impression that animal crime is a higher priority with the police now than before. The police follow up most cases where the NFSA reports animal crime.

Challenges
For several years, we have worked to increase the number of supervisory activities. At the same time, we feel that the NFSA’s other activities can be as effective, if not more so, in safeguarding food safety and the health and welfare of animals and fish. The challenge is to measure the effect of different methods, for example how guidance influences the enterprises’ regulatory compliance compared with supervisory activities with subsequent sanctions.

We still have some challenges when it comes to maintaining a sufficiently uniform control regime. At the same time, no two cases are the same. The goal is for professional judgement and use of measures to be as consistent as possible. The indicators we use to determine how uniform the control regime is (variation in regulatory compliance and variation in the use of measures) are not optimal. An internal audit in 2016 identified challenges relating to the administrative quality of our supervision reports. Good administrative competence is crucial to society’s confidence in the NFSA, and we must improve this quality.

There is potential for improvement when it comes to making better use of all the knowledge we acquire through our supervisory activities, and also in using data from other available sources. Follow-up work after an inspection is time-consuming. In our opinion, the smiley inspection method can be applied in other supervisory areas in time.

We can develop inter-agency cooperation further to make us more able to uncover intentional violations of regulations and crime in the areas we are charged with supervising.
Plans
We will continue to work to rationalise our supervisory activities. We will transfer the smiley inspection method, with standardised reports completed on site, to other supervisory areas. Team-based control campaigns and supervisory activities relating to chains/groups of companies can be used more. We can make better use of data that we produce and obtain from other relevant sources in the management and prioritisation of our supervisory activities. We will also conduct pilot projects to test a method for measuring the effect of supervisory activities.

In order to strengthen the administrative quality of supervision reports, we will emphasise improving quality control in the regions. We will revise our internal guidelines for use of measures and processing of documents. We will also strengthen our inspectors’ competence in the use of measures by holding courses for all personnel involved in supervisory activities.

We will continue to prioritise consideration of appeals in order to ensure both efficiency and quality.

COMMUNICATION AND GUIDANCE
We have prioritised strengthening the NFSA’s guidance, among other things by intensifying our plain language efforts, and improving the digital services and information that are in high demand among our users. At the same time, we have chosen to use a broad range of channels to reach all our target groups with relevant information.

Goals
The main objective of the communication work is to attain the NFSA’s effect goals.

- We shall inform, guide and seek to establish dialogue with enterprises, industries and stakeholders who are affected by our activities.
- We shall also help to enable the population to make informed decisions.
- Digital communication is to be the general rule for communication, both with business and industry and with the general public. The NFSA’s website shall ensure digital service provision, not just provide information.

The NFSA’s communication work shall live up to the central government principles regarding openness, coherency, participation and reaching all users.

Results
We have used our online services, social media and other channels to provide information and guidance to enterprises, business and industry and the Norwegian population regarding new regulations. We have also been in dialogue with all these target groups about findings, interpretation and communication of results from supervisory activities and status information. In 2016, we introduced a Facebook page to provide guidance on travelling with pets. The finding of chronic wasting disease (CWD), antibiotic resistance and the smiley inspection campaign have been the most important topics in our communication work in 2016, and this work has made a positive contribution to our results in these areas. Our communication work has also helped to highlight the salmon lice problem.

In order to help to enable the population to make informed decisions, we have published reports on status, warnings and risk management via mattilsynet.no, matportalen.no and via social media. And, not least, the NFSA’s proactive press relations work has generated media stories about safe food, animal health, animal welfare and aquaculture that have reached the whole Norwegian population.
Plain language
The NFSA shall write all its texts in plain language so that our users can find the information they need, understand the contents of the text and use it to do what they need to do. We have held regular meetings between our language consultants and executive officers, in addition to other plain language training and awareness-raising measures. During the year, we have received our first positive feedback from users saying that it has become easier to understand the language used in supervision reports, guides and other texts.

Digitalisation first
Work on the NFSA’s website has been carried out in accordance with the goal to renew, simplify and improve public services. We have prioritised improvements to the tools and information most frequently sought out by our users. By increasing users’ completion rate, i.e. the percentage of users who succeed in completing their planned tasks, we increase the self-service rate and avoid unnecessary enquiries by phone and email, which can, in turn, free up time for supervisory activities. The average completion rate for the most important services at the NFSA’s website mattilsynet.no was 66% in 2016, unchanged from the previous year.

The service known as the ‘pet calculator’ allows pet owners to check what rules apply when crossing national borders with their pets. With 287,300 visits, this was the most frequently used tool at mattilsynet.no. A total of 72% of users state that they were able to carry out their planned tasks. This is an improvement of 6% compared with the previous year. The NFSA also launched a Facebook page on this topic in July 2016. The page has been a success: feedback has been good, and the page has dealt with about 1,000 enquiries. We received 3,500 phone calls about the rules that apply to travel with pets during the same period.

Matportalen.no had 1,245,397 visitors in 2016, a considerable increase of 45%. The digital presentation of smiley inspection results is one important reason for the increase. In addition, the NFSA now makes active use of Facebook to communicate food safety information from the Matportalen website. By means of more targeted texts and marketing, we have increased its traffic by 57% in 2016.

In order to help raise awareness and spread knowledge of fish health (salmon lice), we launched the online service Fish Health in collaboration with BarentsWatch in 2016.

The press contact service
The NFSA’s press contact phone service is an important contribution to openness. We registered approx. 1,000 enquiries to the head office's press contact phone service. Media enquiries to the regions come in addition to this. The NFSA was mentioned in the media around 16,000 times in 2016. This is at the same level as the previous year.
Credible and efficient communication is an important part of the work of maintaining and further developing consumers' confidence in the food administration and food production. Media work is an important element of this work. In 2016, the NFSA climbed to second place in Ipsos' annual reputation survey of public agencies. In the survey, 75% of respondents stated that they have a good impression of the NFSA.

Challenges

Professional challenges cause communication challenges. In 2017 we expect chronic wasting disease (CWD), antibiotic resistance, fish health and animal welfare to be demanding topics in our communication work, both because the topics are complex and because a large number of parties with different interests are involved. The great interest in the significance of contaminants in food means that the spotlight is also on the way in which the authorities communicate about food safety. This is an issue that the NFSA will maintain a particular focus on in the time ahead.

Plans

We will intensify our efforts to strengthen the NFSA's guidance to our users. By means of more plain language and improvement of our online services, among other things, the NFSA shall become more accessible, while at the same time reducing the amount of time spent answering enquiries and getting more people to use our website to complete their tasks.

We will strengthen our communication via digital media by improving the services and information most frequently sought by our users. At the same time, we will continue to use a broad range of channels to reach all relevant target groups.
RESOURCE USE AND PRODUCTIVITY

The resource use reflects that we are investing in a new organisation in order to rationalise operations in the long term. The introduction of smiley inspections has contributed to a significant increase in supervision productivity in the area 'retailers, establishments that serve food, transport and storage'.

Goals

A more efficient organisation. We shall develop further to ensure that we fulfil the Government’s ambitions as expressed through the debureaucratisation and efficiency reform. We shall develop a simpler and more efficient organisation, and have set ourselves the following long-term goals for resource use:

- More efficient operations – a bigger proportion of resources shall be spent on core tasks
- Increased supervision productivity

Results

Resource use reflects that we are investing in a new organisation

In order to realise the NFSA’s strategy, a higher proportion of our resources shall be used for core activities. By core activities is meant work directly related to regulatory development, supervision, communication/guidance and knowledge collection/analysis. We spent 57.3% of the time at our disposal on core activities in 2016, compared with 57.7% in 2015. This reflects that we have invested a lot of time and efforts in developing and improving the organisation. We intensified our work to develop a more uniform control regime and gave priority to developing competence, leadership and employee ship. Important individual projects included forward-looking meat control, more efficient certificate services, digital letters, an improved question and answer service and new agreements for the NFSA’s official control systems and many of its offices. The proportion of available time spent on administration and management decreased. Overall, we believe that this forms a good basis for developing more efficient operations and increasing the amount of resources used for core activities.

We used 95% of our budget. We consider this degree of utilisation satisfactory, since most of the unused funds were due to delays in some major projects which resulted in expenses not being paid until 2017. The annual accounts show that our operating expenses increased by 3.2% compared with 2015 and that the payroll expenses’ share of operating expenses remained virtually unchanged during the same period. The reasons for the increase in operating expenses were investments in future-oriented office solutions and increased payroll expenses resulting from the wage settlement, other obligations under the collective agreement and a small increase in the number of full-time equivalents. The table below shows how the financial key figures have developed over the past three years.

Table 6 Financial key figures

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<thead>
<tr>
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<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>Degree of utilisation items 01–29</td>
<td>98%</td>
<td>94%</td>
<td>95%</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>1 225 442 887</td>
<td>1 182 955 962</td>
<td>1 221 179 149</td>
</tr>
<tr>
<td>Payroll percentage of operating expenses</td>
<td>62%</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>Payroll expenses per full-time equivalent</td>
<td>596 263</td>
<td>612 205</td>
<td>632 384</td>
</tr>
</tbody>
</table>

The key figures are based on information provided in the annual accounts and are calculated in accordance with the definitions provided by the Norwegian Government Agency for Financial Management (DFØ) in its guidance memo Årsrapport for statlige virksomheter (‘Annual report for government agencies’ – in Norwegian only).
Appendix 3 contains statistics on the NFSA’s production and use of resources, including matters that the NFSA has been asked to report on, but that the agency does not use in its corporate governance.

Smiley inspections led to increased supervision productivity

In 2015, we introduced a standardised method for measuring supervision productivity. Initially, we measure productivity for inspections in the area ‘retailers, establishments that serve food, transport and storage’. We chose this area because we want to have a baseline for assessing whether the introduction of the smiley inspection scheme has a bearing on productivity. We carried out 4.1 inspections per person-week in this area in 2015, and this figure increased to 5.5 inspections per person-week in 2016. The productivity improvement of approx. 34% can be attributed to the introduction of the smiley inspection scheme.

Challenges

Resources must be prioritised on the basis of an overall assessment of development trends and challenges in our administrative area. Our goal is to spend more resources on core activities and increase supervision productivity. We have laid good groundwork that will allow us to assess whether changes in the use of resources reflect our priorities, but so far, no goals have been defined.

We have established methods and structures that enable reliable productivity measurements. The challenge in the time ahead, in addition to ensuring that the data we register are of satisfactory quality, is to define concrete goals and find new areas of application that can give added value in relation to our management.

Plans

We want to reap the benefits of our restructuring and develop productivity measurements. In order to achieve this, we will continue our work to operationalise goals for resource use. This work will be seen in conjunction with the restructuring and rationalisation work that is already under way.

We will further develop the use of productivity measurements based on experience gained from our use of the new indicator.
The management and control system mostly works well and is documented in accordance with the Regulations and Provisions on Financial Management in Central Government. We must improve our internal control and continuously work to improve processes, methods and tools.

Brief description of the current situation

The NFSA has management and control. Our corporate governance principle is goal and performance management, and we use block budgetary allocation to adapt our staffing level. The strategy is used actively in our management when decisions are made, and our decisions are to a greater extent than before based on documented knowledge. However, we need to further develop internal control and improvement work. We have not had any material nonconformities or critical security incidents in 2016.

The development, establishment and use of digital solutions for internal and external users are one of our priority areas. We have introduced digital letters to both private individuals and enterprises, and results from smiley inspections are immediately and automatically published at matportalen.no.

An employee survey shows that the NFSA staff are highly committed and perceive their implementation capacity as good. Important priority areas include strategic competence development and further development of self-governing teams and employees. So far, 30 office locations have found new premises. This gives us more cost-efficient premises that will help to increase digitalisation, cooperation and sharing of competence.

Strategic measures and priorities

We will continuously develop our corporate governance. Our activities shall be based on risk assessments.

Digitalisation will be one of the most important tools for developing our activities, and web-based solutions shall be the main rule in our communication with the population and business and industry. We will use technology to become more efficient and user-oriented. In addition, digital tools will underpin our core tasks. We will make more use of knowledge and data in all our work processes.

Strategic competence development and appropriate staffing for the future will be important in order to translate our competence into action and succeed in fulfilling our social mission.

We will continue to conduct evaluations and continuously follow up the restructuring of the NFSA organisation. Competence development, our employees and an organisation capable of facing future challenges will be crucial if we are to succeed in fulfilling our social mission and remain the key official agency in food policy implementation in future.

CORPORATE GOVERNANCE AND QUALITY

Corporate governance is to an even greater extent built on systematic assessments of knowledge. Data analyses and use of data must become an even more integral part of our management.

Goals

We shall be clear in our management and follow up decisions.
• Management shall be based on good documentation of the current status and knowledge about how the situation is developing.

Results

Management decisions are to a greater extent than before based on documented knowledge. We have implemented the Instructions for Official Studies and Reports, and we make a more thorough assessment of effects, consequences, knowledge about current status and trends before we define our priorities. Through our work on the annual report for 2015 we developed our ability to assess the status for our effect goals. These assessments, together with risk assessments and political guidelines, formed the basis for our priorities for 2017. We need to further develop the systems for execution and documentation of risk assessments.

Our organisation has worked to improve data quality so that we can use data from our activities in planning and management. It is necessary to further develop and secure data so that we can develop our productivity measurements for more processes and levels. Some work remains to be done before we have the necessary data sets for use in analyses.

We have taken several steps to achieve clearer management. The management’s review, which is intended to ensure that the internal control and quality system functions as intended, was carried out in connection with the director general’s annual management dialogue discussions with the directors of the regions and at the head office.

We have continuously evaluated several aspects of the new organisation. The results will be used to further adjust and adapt the organisation.

The project *Hjulet rundt i praksis*, which is a continuation of the time thieves work, forms the basis for further development our improvement work.

The NFSA’s internal audit entity has carried out two audits. The NFSA has strengthened its follow-up after audits and other improvement work. Nonconformities are registered in the improvement portal. Several of the audits have found that our internal control needs to be further developed and better documented. We have cooperated with our sister institutions in the other Nordic countries on a common scheme for independent review of whether the internal audit is functioning as intended.

ESA’s audits of the NFSA contribute to strengthening confidence in the Norwegian food administration. In 2016, ESA carried out inspections in relation to traceability of meat and meat products and our official control systems in the animal feed area. ESA also conducted a general review of previous audits that included follow-up of recommendations made during the period 2011–2016. ESA closed most of the recommendations in connection with this review.

The Office of the Auditor General of Norway had no material remarks relating to the accounts and budget disposition for 2016. The Office of the Auditor General concluded its performance audit of the authorities’ food safety work after conducting a feasibility study. The compliance audit of the NFSA’s control of information in the livestock register will be concluded in 2017.

Challenges

Decisions should be well-founded and more based on documented risk assessments and analyses, and we must make better use of the potential of the data sources available to us. Data that can have a bearing on our decisions are logged and registered in different systems internally as well as externally. We also have large quantities of own data that we have yet to make systematic use of. Data that we use must be of sufficient quality and adequately structured. We still need more knowledge about data analysis in order to make full use of the data.

We have initiated development work to obtain more knowledge about the effect of our actions in order to ensure that our priorities are evidence-based.
In order to realise the NFSA’s strategy, a higher proportion of our resources shall be used for core activities. This means that the development work we undertake to meet these challenges must also involve rationalisation so that we can free up more time for our core activities.

Plans
The NFSA’s corporate governance will be developed further in order to ensure that our processes are efficient. Among other things, we will further develop structures to assess and document risk, both at enterprise level and in relation to our social mission. We will develop an overview of and comprehensive management of all the NFSA’s development activities.

We will continue our work to integrate quality work into the management process. The organisation’s internal control responsibilities will be followed up and our improvement work strengthened.

Measures will be implemented in follow-up of the findings from the evaluation of our new organisation. We will implement measures to support the goal of focusing on the inspectors and allocating more time to core activities. We are working to improve our fees work, including by establishing internal control at all levels.

SECURITY
Security, public safety and personal data work must be adapted to the relevant challenges. New protection of privacy provisions will be a key element in our future security work.

Goals
Our security work shall protect information, staff and assets managed by the NFSA and maintain our ability to carry out our priority tasks.

Results
The requirements that apply to the NFSA’s security work are defined in the Security Act and other legislation that sets out requirements for processing of confidential information and personal data. All security-related documentation has been reviewed and updated in 2016. We have worked on valuation and ROS analysis in accordance with the ISO 27000 standard as a basis for further development of the management system and prioritisation of tasks. The security audit of the MATS system has been followed up with adaptations or allocation of responsibility for remaining tasks.

No critical security incidents were registered in 2016. Our status in the areas physical security and personnel security is fully satisfactory. As regards information security, continuous improvement and adaption to changes in the risk situation and surroundings are required. We have mapped the information stored in different computer systems in order to identify any security challenges.

The NFSA’s security work follows the line principle. The security organisation coordinates and supports the line organisation. The appointment of special regional contact persons for security has strengthened the agency’s overall security work and the dialogue between the regions and the head office on security matters.

Challenges
Considerations of secure handling and storage of information require continuous efforts to maintain secure systems and a robust infrastructure. Through overall corporate governance we must take security aspects into account and integrate such considerations in all development work as well as in our day-to-day routines.
The NFSA needs new risk assessments for the processing and storage of personal data. The EU’s new General Data Protection Regulation also necessitates a thorough review of the new requirements and an assessment of what consequences they will have for the NFSA from May 2018.

The NFSA must reassess which systems are considered critical to its operations. We also need a clarification of roles and responsibilities in relation to official control of sensitive objects.

**Plans**

The NFSA shall continuously work to adapt and develop its management system for security work as an integral part of its corporate governance. The development of valuations, risk assessments and the new provisions on protection of privacy will be important in the time ahead.

**DIGITALISATION**

*Digitalisation will improve and rationalise the NFSA. Digitalisation and the use of digital data make it easier for us to base our priorities and decisions on knowledge obtained from our own activities, the knowledge support institutions, research and the enterprises that we carry out supervisory activities in relation to.*

**Goals**

Digital solutions shall contribute to realising our goals and be of assistance to our users.

- Digital tools shall support work processes and help us to do our work better and more efficiently.
- The production, exchange and compilation of data shall contribute to evidence-based priorities and decisions.
- Private individuals and enterprises shall primarily communicate with the NFSA via electronic channels.

**Results**

MATS is the NFSA’s supervisory support system and the inspectors’ most important tool. It supports our supervisory activities and also has the potential to facilitate rationalisation of our work. We have worked to put in place new agreements for supervisory support systems and to facilitate modernisation of the system and meet future requirements and needs.

We have introduced a new mobile solution for smiley inspections of enterprises in the food and beverage service industry. This solution allows the supervisory staff to complete their work on site, and the enterprises get their results immediately. The inspection results are automatically published at matportalen.no. Feedback from both internal and external users is that they find that this solution simplifies supervisory activities and makes the work more efficient.

We have also improved MATS in the following areas, among others:

- the smiley inspection client Marta
- issuing of export documents
- annual reporting from waterworks
- regulatory amendment in various areas
- border control supervision reports
- operating plan applications in the aquaculture industry
- the livestock register
- municipal mergers
The NFSA sends approx. 100,000 letters a year. We have introduced digital letters both to private individuals and enterprises. This solution has been integrated with the archive system and requires no manual processing. The majority of the letters we send are for enterprises, and we now send these letters digitally through Altinn. Although the proportion of digital letters that are read is increasing, our experience so far is that only 20% of the digital letters are read. Increasing the use of digital mailboxes is a challenge shared by all public agencies. Although we have facilitated digital reading of all letters, we will still send a considerable amount of physical mail containing samples collected in connection with supervisory activities and sampling.

Data are stored and quality-assured for further use to optimise and analyse open data and make them publicly available. Data quality work is discussed in the chapter Gathering knowledge and analysing status. The NFSA has 15 datasets at data.norge.no and three at geonorge.no. Open data from smiley inspections and pertaining requirements are new data in 2016.

Challenges

The number of users of our computer solutions will increase. This requires good solutions and good data quality. MATS is a good tool for carrying out supervisory activities, but will require major adaptations to meet future requirements for quick changes and better data quality. Rapid development offers many opportunities, but requires clear priorities and good management.

The interfaces between the NFSA’s systems and those of business and industry require an increasing degree of flexibility when it comes to shared use of data and registers.

Plans for the future

Digitalisation is a strategic tool for realising our strategy and rationalising the fulfilment of our social mission. New agreements for supervisory support systems are important to our further digitalisation work.

The project to rationalise the issuing of export certificates and the forward-looking meat control project will continue in 2017. We will increase the contribution that digitalisation makes to our work to fulfil our social mission:

- **Development of regulations**: We will look into system support for regulatory development.
- **Supervision**: We will adapt our control methodology and develop digital solutions to support the completion of more work on site. We will also improve our data collection.
- **Communication and guidance**: We will improve digital communication with our users and further develop our self-service solutions.
- **Gathering knowledge and analysing status**: We will further develop our use of own data and data from other parties as a basis for our priorities and decisions.

**AN ATTRACTIVE WORKPLACE WITH GOOD COOPERATION AND FUTURE-ORIENTED COMPETENCE**

The changes in our organisation require us to make more efficient use of our resources. We have to change how we work, both our methods and our processes, and we need future-oriented competence.

Goals

We develop the people who work for us to meet society’s needs by:

- having the right expertise and staffing for the future
- organising our work efficiently and developing into an organisation that translates competence into action to ensure that food is safe and animal welfare safeguarded.
Results

Our employee survey shows that our employees are highly committed and perceive their implementation capacity as good.

Our employees are motivated by our social mission and are highly committed to their work. Our implementation capacity is perceived as good despite the demanding restructuring process. We have some improvement areas, including the sometimes heavy workload in some locations. The results are being followed up.

Strategic competence development

The NFSA’s management development programme has emphasised equipping managers to organise and manage self-governing teams in an organisation that demands a lot in terms of exchange of knowledge and cooperation within and between entities. This work will continue with an employeeship initiative in 2017.

Sickness absence somewhat reduced

Sickness absence decreased from 5.9% in 2015 to 5.8%. It is a good thing that sickness absence is developing in the right direction, but we are not satisfied with the result. The inclusive workplace action plan sets a target of 4.9%. We are working actively both to prevent sickness absence and to follow up employees on sick leave to help them to return to work as soon as possible.

The workplace of the future should contribute to increased cooperation and sharing of competence

Work on the layout of our workspaces is an important measure in the efforts to achieve the goals of increased cooperation and sharing of competence within and between entities. We have had about 30 procurement and moving-in projects running in parallel all over Norway. So far, the feedback from employees who have moved into new premises has been positive.

Challenges

We have to cooperate well and have future-oriented competence. The changes in our organisation require us to make more efficient use of our resources. We therefore need to change how we work, both our methods and our processes, and we also need the right competence. It is important to the new organisation to develop self-governing teams with good cooperation and an agreed understanding of roles and expectations.

The NFSA must have a sufficient overview of resource and competence gaps and develop suitable processes or tools for identifying and closing critical gaps. This is crucial if we are to achieve the practical results required to fulfil our social mission. Fish health and fish welfare is a competence area where it has been challenging for us to recruit capable employees for some time. We need employees that are capable of dealing with developments in aquaculture. The situation will probably become even more challenging in the coming years, and we are working on special long-term measures to recruit, develop and retain capable employees.

Plans

The NFSA will implement a new employer strategy in 2017 that is intended to help to underpin the agency’s overriding goals and strategies. The employer strategy will state important focus areas and priority measures in the areas of management, employeeship, competence and cooperation for the period until 2020. The following areas will be given particular priority in 2017:

- developing a system for mapping competence needs in order to ensure that we have a future-oriented and risk-based basis for competence development relating to our social mission
- the employeeship initiative as a prerequisite for the successful further development of self-governing teams
- measures that underpin and promote the effects of open-plan, group-based office solutions
Increased utilisation of marine resources brings new requirements

In future, more of the world’s food production will come from the sea. Utilisation of marine resources will involve increasing production in existing industries and developing new marine industries and new marine products, such as seaweeds and sea cucumber. This development also entails utilisation of fish oils, residual raw materials and seaweed for specialised products aimed at the food, health food, feed, cosmetics and pharmaceutical industries. A corresponding development is taking place on land, for example in the increasing use of insects in food and feed. As a major seafood nation, Norway aims to be at the forefront of developments when it comes to utilising marine resources.

It is important that this development does not take place at the expense of food safety, animal health or the environment. This demands a lot of business and industry in terms of having knowledge, taking responsibility and seeing the hazards that might arise in the production process.

The NFSA’s role places it at the intersection between sustainability and food safety on the one hand and efficient production on the other. We are charged with safeguarding the health and best interests of both animals and consumers, but without being an obstacle to crucial development. In short, we have to be wise, innovative and have the necessary knowledge. We must also have regulations that are adapted to developments and ensure that products are safe.

Norwegian fish is in demand in 143 countries, and the importing countries are making more stringent requirements. It is no longer enough to say that the fish is Norwegian. Special documentation and requirements to comply with the importing countries’ special regulations are becoming increasingly common. This makes market access more vulnerable. The NFSA functions as a guarantor that the fish is safe to eat and that the requirements stipulated by the importing countries are met. Since the export of seafood takes place 24/7, we must develop efficient certificate systems adapted to export.

The sharing economy and the circular economy can be food safety challenges

It is also becoming more important to fully utilise resources. Food waste and fish and meat trimmings that are not used for food are resources that can be used to make other products. The circular economy – business models that aim to avoid waste and see everything as resources in a circular system – could result in more contaminants in food. Without good control of production, reuse of packaging and the use of waste as fertiliser can lead to toxins ending up in finished food.

The sharing economy creates new marketplaces that connect service providers with customers. Food that would otherwise have been discarded is one example of products in the sharing economy.

There is currently little or no regulation of these marketplaces. For the NFSA, this means that food is changing hands outside the ordinary systems regulated by traceability and hygiene regulations. We must have both the ability and expertise necessary to understand where such new challenges appear and develop our control methodology to ensure food safety.
Growing international trade makes new demands

Growing demand, new dietary habits and more import mean that average Norwegians are increasingly participating in the international food trade. Norway and the EU is a common market for food, and nearly half of all food consumed in Norway is imported. This gives us more foods to choose from and carries health benefits, among other things because we have access to a broader selection of fruit and vegetables throughout the year.

However, less overview of the origin of goods and increased risk of infection are part of the package. The chains of production are becoming increasingly complex. Raw materials and ingredients cross national borders many times before reaching consumers. This is happening at an increasing pace. Since digital solutions contribute to more trade taking place online, official control becomes more difficult. Hygiene failures or contamination resulting from errors or fraud can affect more people more quickly.

The clearest trend outlined in the European Commission’s report ‘Delivering on EU food safety and nutrition in 2050 - future challenges and policy preparedness’ is that the pace of change will increase and that it will become difficult to predict how the different factors that have a bearing on food safety will develop.

The decline in the global economy creates a demand for even cheaper food, and food crime is growing. Food of unknown origin is a risk in itself. It could contain infective agents or contaminants or have been handled in an unhygienic manner. This lack of traceability makes it even more difficult to discover fraud.

Infective agents know no borders. Increased travel, especially with pets, increases the risk of infectious agents being imported that can be transmitted by humans or animals. Extensive import and smuggling of pets are taking place, and are already posing a risk to both animal and public health.

The NFSA will make use of the possibilities inherent in new technology

The welfare state is under pressure, and there is a need to rationalise the public sector. The technology that is making the sharing economy possible brings challenges, but it also brings possibilities to carry out our tasks in a better and more efficient manner. Already, new areas of our supervisory activities are supported by mobile solutions that allow us to conclude inspections on site.

Social media that spread important messages quickly and directly to different target groups can rationalise guidance that has previously been provided over the phone. We are already testing drones in connection with wild oats control. Data from the industries in our areas of responsibility and from other government agencies can be used to make our official control more targeted.

We have exciting and challenging years ahead of us. In addition to utilising the digital possibilities, we must further develop other aspects of our activities. Developments in our administrative areas require us to be adaptable, flexible and use differentiated measures. The present organisation is equipped to face this future in a good manner.
MANAGEMENT COMMENTS

Purpose

The NFSA’s work is based on the following goals:

- Ensure safe food
- Ensure safe drinking water
- Promote healthy plants, fish and animals
- Promote animal welfare and respect for animals and fish
- Promote health, quality and consumer interests
- Ensure environmentally friendly production

We are to address considerations for players throughout the entire food chain, including market access abroad. Considerations of safe food and drinking water shall always take precedence in our administration of the Food Act. The NFSA is also tasked with promoting the objectives of other legislation that the agency is charged with administrating.

The NFSA is subordinate to the Ministry of Agriculture and Food, the Ministry of Trade, Industry and Fisheries, and the Ministry of Health and Care Services in professional matters, and to the Ministry of Agriculture and Food in administrative matters. The NFSA is an ordinary government administrative agency, and its accounts are based on the cash principle, cf. the accounting principles section in the notes to the annual accounts. The annual accounts make up part VI of the NFSA’s annual report.

Assessments of material circumstances compared with the previous year

The NFSA’s operating expenses under chapter 1115 item 01 amounted to NOK 1.221 billion in 2016, compared with NOK 1.169 billion in 2015. The main reason for the increase in operating expenses is the NFSA’s large investments in future-oriented office solutions in connection with the project Fremtidsen arbeidsplass (‘the workplace of the future’). These payments in 2016 amounted to NOK 30.3 million, compared with NOK 2.2 million in 2015. In addition, payroll expenses have increased by NOK 28.1 million as a result of the wage settlement and other obligations under the collective agreement, and the average number of full-time equivalents has increased during the year.

Full-time equivalents, payroll and non-wage labour expenses

The average number of full-time equivalents in the NFSA in 2016 was 1.255, compared with 1.251 full-time equivalents in 2015.

Other operating payments

Other operating payments increased by NOK 10 million in 2016, from NOK 417 million in 2015 to NOK 427 million in 2016. This increase was primarily due to growing costs relating to monitoring and control programmes and an extraordinary payment in connection with the termination of a tenancy contract. At the same time, expenses relating to purchase of services from external parties have decreased. This is due to a temporary reduction in the development of the MATS system.
Assessments of material circumstances between allocation and accounts

Chapter 1115 item 01 Operating expenses

The NFSA had NOK 1.253 billion at its disposal under the operating expenses item in 2016. Adjusted for additional revenues in the amount of NOK 3.7 million under chapter 4115 item 02, the result was underspending in the amount of NOK 35 million (2.8% of the allocation) in 2016. The underspending was mostly due to delays in major projects resulting in payments not taking place until 2017. The Ministry of Agriculture and Food withheld NOK 2.1 million of the total allocation under this item. The withheld amount is not included in the NFSA’s annual accounts.

Chapter 4115 item 01 Fees etc.

NOK 149.9 million was paid in fees, coercive fines and non-compliance fees in 2016, while the revenue budget was NOK 145.9 million. This gives additional revenues in the amount of NOK 4 million, which can partly be explained by the fact that fee revenues from veterinary border controls were higher than expected. The scope of border controls is largely market-driven, which makes fee revenue estimates uncertain.

Chapter 4115 item 02 Operating revenues and reimbursements etc.

Operating revenues and reimbursements amounted to NOK 9.3 million. They mostly consist of revenues relating to supervision of pharmaceuticals, subletting of premises, administration fees and grants/reimbursements for various projects. The additional revenue of NOK 3.7 million is due to incidental revenues during the year.

Chapter 5550 item 70 Environmental tax on pesticides

The accounts show additional revenues in the amount of NOK 22.5 million in 2016. The environmental tax on pesticides is collected on wholesale sales. Pesticides are used in plant production where pest attacks vary considerably depending on climate and weather conditions. Overall, conditions in 2016 resulted in a considerably higher consumption of pesticides than reflected in the budget.

Auditing

The Office of the Auditor General of Norway is the external auditor, and the auditing of the annual accounts had not been completed at the time of writing. The audit report is exempt from public disclosure until the Storting has received Document No 1 from the Office of the Auditor General, but it will be published on the NFSA’s website as soon as it becomes public.

The Director General’s report

I hereby confirm that:

- the annual accounts provide an accurate picture of the appropriations at the NFSA’s disposal and of all the expenses, revenues, assets and liabilities recognised in the accounts as of 31 December 2016.
- the annual accounts are submitted in accordance with the Provisions on Financial Management in Central Government, the Ministry of Finance’s circular R-115 and the Ministry of Agriculture and Food’s requirements.

Oslo, 15 Mars 2017

Harald Gjein

Director General

The Norwegian Food Safety Authority
ACCOUNTING PRINCIPLES

General information about the annual accounts

The annual accounts are presented in accordance with the requirements set out in section 3.4 of the Provisions on Financial Management in Central Government adopted on 12 December 2003 with amendments, most recently amended on 5 November 2015, the Ministry of Finance’s circular R-115 and any additional requirements stipulated by the Ministry of Agriculture and Food.

The presentation of the general ledger accounts reporting has been changed somewhat from 2015, and comparable figures for 2015 have been prepared pursuant to the new presentation system.

The presentation of the appropriations reporting and the general ledger accounts reporting complies with the fundamental principles for annual accounts and accounting in central government as set out in the Provisions section 3.4.2 and in the Storting’s Appropriation Regulations sections 3, 4 and 13.

Presentation of the appropriations reporting

The appropriations reporting comprises a top part containing the appropriations reporting and a bottom part showing the balances in the capital accounts.

The appropriations specification shows all accounting figures that the NFSA has reported to the central government accounts and changes in outstanding accounts with the Treasury. The expenses and revenues are grouped by chapters and items that the NFSA is authorised to use.

Authorisations received are not shown in the column for total allocation, but are discussed in note B to the appropriations reporting. Expenses relating to debit authorisations have been entered in the accounts and reported to the central government accounts and are shown in the accounts column.

- Note A explains the total allocation
- Note B explains the authorisations used and the calculation of the amount that may be carried forward to the following year

Presentation of the reporting of general ledger accounts

The presentation comprises a presentation of the general ledger accounts and a specification of the outstanding accounts with the Treasury at year-end. The presentation of the general ledger accounts shows the NFSA’s reporting to the central government accounts at accounting line level in accordance with the standard chart of accounts for government agencies.

The specification of outstanding accounts with the Treasury is broken down by account groups. In addition to the note on accounting principles, the presentation of the general ledger accounts includes the following notes:

- Note 1 Payments from operations
- Note 2 Payments of payroll expenses
- Note 3 Other operating payments
- Note 4 Financial income and financial expenses
- Note 5 Disbursed for investments
- Note 6 Debt collection and other transfers to the central government
- Note 7 Grant administration and other transfers from the central government
- Note 8 Connection between the settlement with the Treasury and outstanding accounts with the Treasury

The line ‘Net reported to the appropriation accounts’ is identical in both presentations.
**Fundamental principles for the annual accounts**

- The one-year principle: The accounting year follows the calendar year
- The completeness principle: The accounts contain all expenses and revenues reported for the accounting year
- The cash accounting principle: The accounts are prepared in accordance with the cash basis for accounting
- The gross principle: Expenses and revenues are entered in the accounts as gross amounts
- Internal invoicing is not practised.

**Chart of accounts**

Current bookkeeping is based on the standard chart of accounts.

**Employer’s National Insurance contributions, net recognition system, employees’ pension contributions and group life insurance**

Employer’s National Insurance contributions are not paid, but are recognised in the accounts and reported as an expense in the chapter relating to the NFSA and taken to income in the national budget’s common chapter on the National Insurance Scheme.

The NFSA is included in the net recognition system and is, as of 1 January 2015, authorised to expense paid VAT under chapter 1633, Net system, VAT paid by government agencies, item 01 Operating expenses.

Employees’ pension contributions of 2% are not transferred to the pension fund, but covered over a central chapter in the national budget.

Group life insurance premiums are not paid, but debited under chapter 5309 item 29, cf. circular R-101, section 4.3.1.

**Intangible assets and fixed assets**

Operating equipment with an acquisition cost of more than NOK 30,000 is expensed under account group 47–49. Operating equipment with an acquisition cost of less than NOK 30,000, but that the NFSA deems to be part of an equipment pool (pool approach), is nevertheless expensed under account group 47–49 (if the total acquisition cost exceeds NOK 30,000).

**The self-insurance principle**

The Norwegian State applies the self-insurance principle. No items intended to reflect alternative net insurance expenses are included in the annual accounts.

**The Norwegian central government’s group accounts scheme**

The NFSA is not disbursed liquid assets during the year. The NFSA has drawing rights in relation to our group account. The balance in the individual settlement account in Norges Bank is set to zero at the start of each new financial year.
## Presentation of the Appropriation Reporting for the Financial Year 2016

### Expenses chapter

<table>
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<tr>
<th>Expenses chapter</th>
<th>Chapter name</th>
<th>Item</th>
<th>Item text</th>
<th>Note</th>
<th>Total allocation</th>
<th>Accounts 2016</th>
<th>Overspending (‐) and underspending</th>
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**Total amount expensed**

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<th>Total taken to income</th>
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**Total taken to income**

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<td>145 886 000</td>
<td>149 917 400</td>
<td>5 031 400</td>
</tr>
<tr>
<td>4115</td>
<td>Operating revenues and reimbursements etc.</td>
<td>5 619 000</td>
<td>9 303 708</td>
<td>3 684 708</td>
</tr>
<tr>
<td>5309</td>
<td>Incidental revenues, misc.</td>
<td>371 733</td>
<td>1 717 833</td>
<td>3 684 000</td>
</tr>
<tr>
<td>5550</td>
<td>Environmental tax on pesticides</td>
<td>50 000 000</td>
<td>72 592 469</td>
<td>22 592 469</td>
</tr>
<tr>
<td>5584</td>
<td>Other taxes</td>
<td>239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5700</td>
<td>The National Insurance Scheme’s revenues</td>
<td>85 232 962</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Net reported to the appropriation accounts**

<table>
<thead>
<tr>
<th>Item</th>
<th>Item text</th>
<th>Total allocation</th>
<th>Accounts 2016</th>
<th>Total taken to income</th>
</tr>
</thead>
<tbody>
<tr>
<td>4115</td>
<td>Fees etc.</td>
<td>145 886 000</td>
<td>149 917 400</td>
<td>5 031 400</td>
</tr>
<tr>
<td>4115</td>
<td>Operating revenues and reimbursements etc.</td>
<td>5 619 000</td>
<td>9 303 708</td>
<td>3 684 708</td>
</tr>
<tr>
<td>5309</td>
<td>Incidental revenues, misc.</td>
<td>371 733</td>
<td>1 717 833</td>
<td>3 684 000</td>
</tr>
<tr>
<td>5550</td>
<td>Environmental tax on pesticides</td>
<td>50 000 000</td>
<td>72 592 469</td>
<td>22 592 469</td>
</tr>
<tr>
<td>5584</td>
<td>Other taxes</td>
<td>239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5700</td>
<td>The National Insurance Scheme’s revenues</td>
<td>85 232 962</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note A Explanation of the total allocation

<table>
<thead>
<tr>
<th>Chapter and item</th>
<th>Carried forward from the previous year</th>
<th>Allocations for the year</th>
<th>Total allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1115 01</td>
<td>50 291 000</td>
<td>1 203 055 000</td>
<td>1 253 346 000</td>
</tr>
<tr>
<td>1115 22</td>
<td>651 000</td>
<td>13 301 000</td>
<td>13 952 000</td>
</tr>
<tr>
<td>1115 71</td>
<td>4 200 000</td>
<td>4 200 000</td>
<td>4 200 000</td>
</tr>
</tbody>
</table>

Note B Explanation of the authorisations used and the calculation of the amount that may be carried forward to the following year

<table>
<thead>
<tr>
<th>Chapter and item</th>
<th>Key words</th>
<th>Overspending (-)/underspending</th>
<th>Expensed by others in accordance with debit authorisations granted</th>
<th>Overspending (-)/underspending based on other parties' expensing</th>
<th>Additional revenues in acc. with add. revenue authorisation</th>
<th>Cost savings</th>
<th>Total basis for carryforward</th>
<th>Max carryforward amount</th>
<th>Possible carryforward amount calculated by the NFSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1115 01*</td>
<td></td>
<td>31 381 335</td>
<td>31 381 335</td>
<td>3 684 708</td>
<td></td>
<td></td>
<td>35 066 043</td>
<td>60 152 750</td>
<td>35 066 043</td>
</tr>
<tr>
<td>1115 22</td>
<td></td>
<td>3 232 641</td>
<td>3 232 641</td>
<td>3 232 641</td>
<td></td>
<td></td>
<td>665 050</td>
<td>665 050</td>
<td></td>
</tr>
<tr>
<td>1115 71</td>
<td>'estimated appropriation'</td>
<td>-1 834 550</td>
<td>-1 834 550</td>
<td></td>
<td></td>
<td></td>
<td>-1 834 550</td>
<td>210 000</td>
<td></td>
</tr>
</tbody>
</table>

Explanation of the use of budget authorisations

Debit authorisations received
The Ministry of Agriculture and Food granted the NFSA a debit authorisation of NOK 700,000 under chapter 1150 item 77 to be spent on tasks under the action plan for risk reduction in connection with pesticide use (2010–2014), of which NOK 400,000 is to be spent on the web-based pesticide authorisation course – foundation course, and NOK 300,000 is to be used on bird and mammal scenarios for use in connection with approval. The NFSA has spent NOK 687,066 of the debit authorisation for implementation of the national Agricultural Agreement.

The NFSA has also been granted a debit authorisation in connection with supervision under the Gene Technology Act, chapter 1400 item 01, for a maximum amount of NOK 100,000. The NFSA has spent NOK 97,840 of this debit authorisation.

In addition, the Ministry of Health and Care Services placed NOK 200,000 at the NFSA’s disposal in 2016 for contingency planning and exercises relating to follow-up of the Act on Health and Social Preparedness, chapter 0702 item 21 Preparedness. The NFSA has spent NOK 199,617 of this debit authorisation.

The Ministry of Health and Care Services has also allocated NOK 628,000 under chapter 0714 item 21 for work on drinking water. These funds were carried forward from 2015. The NFSA has debited NOK 340,727 to the drinking water project.

Authorisation to exceed operating appropriations in return for corresponding additional revenues
The NFSA has budgetary authorisation to exceed the appropriation under chapter 1115 item 01 in return for corresponding additional revenues under chapter 4115 item 02.

*Withheld funds
Pursuant to the allocation letter, the Ministry of Agriculture and Food has withheld NOK 2,100,000 of the total appropriation under chapter 1115 item 01 to cover expenses relating to national expertise in international bodies and EEA translations. The Ministry of Agriculture and Food has expensed NOK 1,818,276 under the NFSA chapter/item 1115 01.
Reporting of paid VAT
The NFSA falls under the net recognition system and has been authorised to report paid VAT under chapter 1633 item 01. This applies to VAT relating to the NFSA’s expenses recognised under items 01–49. In 2016 the NFSA paid NOK 64,229,085 in VAT.

The key words 'estimated appropriation'
The appropriation for the NFSA under chapter/item 1115 71 is an estimated appropriation intended to cover the Norwegian State’s payment obligations to those who have provided emergency assistance pursuant to the Animal Welfare Act Section 4, and the costs of measures implemented by the NFSA pursuant to the Food Act, the Act relating to Animal Health Personnel and the Animal Welfare Act in cases where the expenses cannot be recovered from the owner/responsible party.
PRESENTATION OF THE GENERAL LEDGER ACCOUNTS REPORTING AS OF 31 DEC.

2016

Operating revenues reported to the appropriation accounts

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Payments from fees</td>
<td>137 133 206</td>
</tr>
<tr>
<td></td>
<td>Payments from grants and transfers</td>
<td>754 906</td>
</tr>
<tr>
<td></td>
<td>Payments received from sales and leases</td>
<td>1 646 065</td>
</tr>
<tr>
<td></td>
<td>Other payments received</td>
<td>6 703 931</td>
</tr>
<tr>
<td></td>
<td>Total payments from operations</td>
<td>146 238 108</td>
</tr>
</tbody>
</table>

Operating expenses reported to the appropriation accounts

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Payroll expenses</td>
<td>793 928 310</td>
</tr>
<tr>
<td></td>
<td>Other operating payments</td>
<td>427 250 839</td>
</tr>
<tr>
<td></td>
<td>Total operating payments</td>
<td>1 221 179 149</td>
</tr>
</tbody>
</table>

Net reported operating expenses

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total investment and financial income</td>
<td>350 902</td>
</tr>
</tbody>
</table>

Investment and financial expenses reported to the appropriation accounts

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disbursed for investments</td>
<td>15 029 211</td>
</tr>
<tr>
<td></td>
<td>Payments of financial expenses</td>
<td>23 444</td>
</tr>
<tr>
<td></td>
<td>Total investment and financial expenses</td>
<td>15 052 655</td>
</tr>
</tbody>
</table>

Net reported investment and financial expenses

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total debt collection and other transfers to the central government</td>
<td>85 376 902</td>
</tr>
</tbody>
</table>

Debt collection and other transfers to the central government

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grants and subsidies disbursed</td>
<td>3 964 116</td>
</tr>
<tr>
<td></td>
<td>Total grant administration and other transfers from the central government</td>
<td>3 964 116</td>
</tr>
</tbody>
</table>

Revenues and expenses reported under common chapters

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group life insurance</td>
<td>1 717 833</td>
</tr>
<tr>
<td></td>
<td>Employer’s National Insurance contributions</td>
<td>85 232 962</td>
</tr>
<tr>
<td></td>
<td>Net recognition system for VAT</td>
<td>64 229 086</td>
</tr>
<tr>
<td></td>
<td>Total reported expenses reported under common chapters</td>
<td>22 721 709</td>
</tr>
</tbody>
</table>

Net reported to the appropriation accounts

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total outstanding accounts with the Treasury</td>
<td>-38 413 391</td>
</tr>
</tbody>
</table>

Overview of outstanding accounts with the Treasury

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other long-term receivables (deposit)</td>
<td>28 090</td>
</tr>
<tr>
<td></td>
<td>Short-term receivables</td>
<td>391 029</td>
</tr>
<tr>
<td></td>
<td>Unpaid tax withholdings</td>
<td>-34 761 397</td>
</tr>
<tr>
<td></td>
<td>Unpaid indirect taxes</td>
<td>-1 145 599</td>
</tr>
<tr>
<td></td>
<td>Other short-term liabilities</td>
<td>-2 925 515</td>
</tr>
</tbody>
</table>

Total outstanding accounts with the Treasury

<table>
<thead>
<tr>
<th>Note</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total outstanding accounts with the Treasury</td>
<td>-38 413 391</td>
</tr>
</tbody>
</table>
### Note 1 Payments from operations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fees for specific services</td>
<td>32 150 027</td>
<td>22 064 498</td>
</tr>
<tr>
<td>Supervision and control fees</td>
<td>104 983 180</td>
<td>114 973 793</td>
</tr>
<tr>
<td><strong>Total payments from fees</strong></td>
<td><strong>137 133 206</strong></td>
<td><strong>137 038 291</strong></td>
</tr>
</tbody>
</table>

**Payments from grants and transfers**

Transfers from the Nordic Council of Ministers (Nordic Working Group for Microbiology & Animal Health and Welfare (NMDD))

<table>
<thead>
<tr>
<th>Payments from grants and transfers</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total payments from grants and transfers</strong></td>
<td><strong>754 906</strong></td>
<td><strong>728 868</strong></td>
</tr>
</tbody>
</table>

**Payments received from sales and leases**

<table>
<thead>
<tr>
<th>Payments received from sales and leases</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental income</td>
<td>1 646 065</td>
<td>1 663 748</td>
</tr>
<tr>
<td><strong>Total sales and lease payments received</strong></td>
<td><strong>1 646 065</strong></td>
<td><strong>1 663 748</strong></td>
</tr>
</tbody>
</table>

**Other payments received**

<table>
<thead>
<tr>
<th>Other payments received</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reimbursements etc.</td>
<td>5 222 151</td>
<td>7 117 419</td>
</tr>
<tr>
<td>Revenues, administrative fees</td>
<td>929 228</td>
<td>671 473</td>
</tr>
<tr>
<td>Other income – reinvoicing</td>
<td>552 551</td>
<td>316 260</td>
</tr>
<tr>
<td><strong>Total other incoming payments</strong></td>
<td><strong>6 703 930</strong></td>
<td><strong>8 105 152</strong></td>
</tr>
</tbody>
</table>

**Total payments from operations**

<table>
<thead>
<tr>
<th>Total payments from operations</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total payments from operations</strong></td>
<td><strong>146 238 108</strong></td>
<td><strong>147 536 060</strong></td>
</tr>
</tbody>
</table>

### Note 2 Payments of payroll expenses

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll*</td>
<td>716 030 593</td>
<td>691 220 493</td>
</tr>
<tr>
<td>Employer’s National Insurance contributions</td>
<td>85 232 962</td>
<td>82 147 797</td>
</tr>
<tr>
<td>Sickness benefit and other reimbursements</td>
<td>-32 963 837</td>
<td>-30 408 236</td>
</tr>
<tr>
<td>Other benefits</td>
<td>13 191 400</td>
<td>12 298 255</td>
</tr>
<tr>
<td>Group life insurance**</td>
<td>1 717 833</td>
<td>0</td>
</tr>
<tr>
<td>Adjustment premiums – municipal and county pension funds</td>
<td>10 719 359</td>
<td>10 549 118</td>
</tr>
<tr>
<td><strong>Total payroll expenses</strong>*</td>
<td><strong>793 928 310</strong></td>
<td><strong>765 807 427</strong></td>
</tr>
</tbody>
</table>

**Average number of full-time equivalents:**

<table>
<thead>
<tr>
<th>Average number of full-time equivalents</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average number of full-time equivalents</strong></td>
<td><strong>1 255</strong></td>
<td><strong>1 251</strong></td>
</tr>
</tbody>
</table>

* The increase was mostly due to the 2016 wage settlement, one-off payments relating to obligations under the collective agreement and an increase in the average number of full-time equivalents.

** Group life insurance premiums were not charged to the accounts in 2015, while for 2016, they were charged to the accounts in December.

*** Of the NFSA's total payroll and non-wage labour expenses, NOK 416,988 concern the Nordic Council of Ministers.
Note 3 Other operating payments

<table>
<thead>
<tr>
<th>Other operating payments</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenses relating to premises</td>
<td>88 035 768</td>
<td>87 048 396</td>
</tr>
<tr>
<td>Rental of machinery, fixtures and fittings etc.</td>
<td>14 630 925</td>
<td>14 628 274</td>
</tr>
<tr>
<td>Minor procurements of equipment</td>
<td>11 672 937</td>
<td>10 931 422</td>
</tr>
<tr>
<td>Repair and maintenance of buildings and premises</td>
<td>1 154 323</td>
<td>1 152 210</td>
</tr>
<tr>
<td>Repair and maintenance of machinery, equipment etc.</td>
<td>30 537 468</td>
<td>30 698 577</td>
</tr>
<tr>
<td>Accounting, audit and financial services</td>
<td>352 686</td>
<td>657 138</td>
</tr>
<tr>
<td>Purchase of services, development and day-to-day operation, ICT*</td>
<td>23 546 687</td>
<td>31 304 061</td>
</tr>
<tr>
<td>Administrative support</td>
<td>28 772 215</td>
<td>28 097 114</td>
</tr>
<tr>
<td>Analysis and veterinary services</td>
<td>99 824 659</td>
<td>95 599 923</td>
</tr>
<tr>
<td>Consultants and other services purchased from external parties</td>
<td>29 230 992</td>
<td>37 746 648</td>
</tr>
<tr>
<td>Travel expenses and subsistence allowance**</td>
<td>35 332 896</td>
<td>33 465 778</td>
</tr>
<tr>
<td>Reim invoicing outlays</td>
<td>2 806 631</td>
<td>843 064</td>
</tr>
<tr>
<td>Other operating expenses***</td>
<td>61 352 651</td>
<td>44 975 929</td>
</tr>
<tr>
<td><strong>Total other operating expenses</strong></td>
<td>427 250 839</td>
<td>417 148 534</td>
</tr>
</tbody>
</table>

* Expenses relating to development and day-to-day operation of ICT solutions have decreased by NOK 7.7 million. This decrease from 2015 to 2016 was mostly due to a temporary reduction in investment activity relating to the supervisory support system Mats.
** Of the NFSA’s expenditure on travel and subsistence allowance and other operating expenses, NOK 160,743.90 and NOK 670,670.83, respectively, concern the Nordic Council of Ministers.
*** Most of the NOK 16.3 million increase in other operating expenses relates to the NFSA’s investments in modern open-plan office premises. See also note 5.

Note 4 Financial income and financial expenses

<table>
<thead>
<tr>
<th>Financial income received</th>
<th>31 Dec. 2016</th>
<th>31 Dec. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest income</td>
<td>350 902</td>
<td>200 646</td>
</tr>
<tr>
<td><strong>Total financial income received</strong></td>
<td>350 902</td>
<td>200 646</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Payments of financial expenses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest expenses</td>
<td>23 444</td>
<td>26 175</td>
</tr>
<tr>
<td><strong>Total payments of financial expenses</strong></td>
<td>23 444</td>
<td>26 175</td>
</tr>
</tbody>
</table>

Note 5 Disbursed for investments

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangible assets and similar</td>
<td>2 063 789</td>
<td>2 683 372</td>
</tr>
<tr>
<td>Machinery and means of transport</td>
<td>0</td>
<td>351 324</td>
</tr>
<tr>
<td>Operating equipment, fixtures and fittings, tools etc.*</td>
<td>12 304 169</td>
<td>7 820 350</td>
</tr>
<tr>
<td>Other expensed investments</td>
<td>661 253</td>
<td>949 281</td>
</tr>
<tr>
<td><strong>Total disbursed for investments</strong></td>
<td>15 029 211</td>
<td>11 804 327</td>
</tr>
</tbody>
</table>

* The NOK 4.483 million increase in expenses relating to operating equipment and fixtures and fittings is due to the NFSA’s investments in modern open-plan office premises. These investments will continue in 2017.
### Note 6 Debt collection and other transfers to the central government

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments of direct and indirect taxes, fees etc.</td>
<td>72 592 469</td>
<td>67 961 368</td>
</tr>
<tr>
<td>Discontinued indirect taxes*</td>
<td>239</td>
<td>0</td>
</tr>
<tr>
<td>Taxes, plant breeder rights</td>
<td>392 721</td>
<td>409 800</td>
</tr>
<tr>
<td>Non-compliance fees</td>
<td>849 058</td>
<td>1 248 105</td>
</tr>
<tr>
<td>Coercive fines**</td>
<td>11 542 415</td>
<td>5 291 406</td>
</tr>
<tr>
<td><strong>Total debt collection and other transfers to the central government</strong></td>
<td><strong>85 376 902</strong></td>
<td><strong>74 910 679</strong></td>
</tr>
</tbody>
</table>

* Some of the indirect taxes collected by the NFSA were discontinued with effect from 1 January 2013. All unpaid indirect taxes after 1 January 2013 were recognised under chapter 5584, item 70 ‘Other taxes, arrears discontinued indirect taxes’.

** Coercive fines have increased by NOK 6.2 million. The increase was due to the coercive fines imposed in the aquaculture industry.

### Note 7 Grant administration and other transfers from the central government

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency assistance for animals – paid to limited liability companies (AS)</td>
<td>2 792 619</td>
<td>2 393 473</td>
</tr>
<tr>
<td>Emergency assistance for animals – paid to sole proprietorships, general partnerships (ANS) or general partnerships with shared liability (DA)</td>
<td>680 701</td>
<td>578 741</td>
</tr>
<tr>
<td>Emergency assistance for animals – paid to non-profit organisations</td>
<td>3 252</td>
<td>22 320</td>
</tr>
<tr>
<td>Emergency assistance for animals – paid to the government administration</td>
<td>487 544</td>
<td>144 220</td>
</tr>
<tr>
<td><strong>Total grant administration and other transfers from the central government</strong></td>
<td><strong>3 964 116</strong></td>
<td><strong>3 138 755</strong></td>
</tr>
</tbody>
</table>

### Note 8 Connection between the settlement with the Treasury and outstanding accounts with the Treasury

**The difference between the settlement with the Treasury and outstanding accounts with the Treasury**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification of recognised settlements with the Treasury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other long-term receivables</td>
<td>28 090</td>
<td>28 090</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17 609 137</strong></td>
<td><strong>419 119</strong></td>
</tr>
<tr>
<td>Specification of reported outstanding accounts with the Treasury</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td><strong>17 190 018</strong></td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX 1 PRODUCTION INDICATORS

### DEVELOPMENT OF REGULATIONS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of EEA memos at stages 1 and 2 considered by the Special Committee for the Food Area (SUMO)</td>
<td>18</td>
<td>12</td>
<td>*</td>
</tr>
<tr>
<td>Number of implementations of EEA regulations within the deadline seen in relation to the total number of implementations that should have been carried out (including the simplified procedure)</td>
<td>74%</td>
<td>72%</td>
<td>73%</td>
</tr>
<tr>
<td>Simplification of rules – number of amendments to regulations involving simplification of the rules</td>
<td>1</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Development of regulations online – number of visits</td>
<td>46 968</td>
<td>73 856</td>
<td>65 783</td>
</tr>
</tbody>
</table>

* Since some procedures have been changed we have not been able to obtain figures for 2016 for all the indicators.

### COMMUNICATION AND GUIDANCE

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matportalen.no – number of visits</td>
<td>858 915</td>
<td>861 239</td>
<td>1 245 397</td>
</tr>
<tr>
<td>Mattilsynet.no – number of visits</td>
<td>1 311 187</td>
<td>1 373 917</td>
<td>1 551 747</td>
</tr>
</tbody>
</table>

### SUPERVISION

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision production – total number of supervisory activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of supervisory activities</td>
<td>71 071</td>
<td>68 113</td>
<td>72 889</td>
</tr>
<tr>
<td><strong>For selected areas:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking water</td>
<td>1 724</td>
<td>1 446</td>
<td>1 430</td>
</tr>
<tr>
<td>Animal welfare</td>
<td>12 648</td>
<td>13 402</td>
<td>13 531</td>
</tr>
<tr>
<td>Primary production involving aquatic animals</td>
<td>3 800</td>
<td>3 573</td>
<td>3 436</td>
</tr>
<tr>
<td>Productivity: Number of inspections per person-week in the area 'retailers, establishments that serve food, transport and storage'</td>
<td></td>
<td>4.1</td>
<td>5.5</td>
</tr>
<tr>
<td>Emergency preparedness – Number/type of exercises held:</td>
<td>34</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>See the Contingency chapter for details</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of risk and vulnerability analyses conducted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Security</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Failure to comply with regulations

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of enterprises subjected to inspections or audits where nonconformities were identified</td>
<td>53%</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>For selected areas:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking water</td>
<td>60%</td>
<td>59%</td>
<td>67%</td>
</tr>
<tr>
<td>Animal welfare</td>
<td>39%</td>
<td>38%</td>
<td>40%</td>
</tr>
<tr>
<td>Fish health</td>
<td>39%</td>
<td>44%</td>
<td>53%</td>
</tr>
</tbody>
</table>

### Uniform professional judgement

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation between regions in the percentage of enterprises subjected to inspections or audits where nonconformities were identified</td>
<td>50–62%</td>
<td>49–60%</td>
<td>45–55%</td>
</tr>
<tr>
<td><strong>For selected areas:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking water</td>
<td>50–73%</td>
<td>50–67%</td>
<td>58–82%</td>
</tr>
<tr>
<td>Animal welfare</td>
<td>33–50%</td>
<td>34–46%</td>
<td>37–43%</td>
</tr>
<tr>
<td>Fish health</td>
<td>35–50%</td>
<td>39–47%</td>
<td>47–55%</td>
</tr>
</tbody>
</table>

### Use of measures

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of enterprises subjected to inspections or audits where nonconformities were identified about which decisions have been made</td>
<td>97%</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td><strong>For selected areas:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking water</td>
<td>98%</td>
<td>97%</td>
<td>98%</td>
</tr>
<tr>
<td>Animal welfare</td>
<td>95%</td>
<td>94%</td>
<td>93%</td>
</tr>
<tr>
<td>Fish health</td>
<td>98%</td>
<td>99%</td>
<td>98%</td>
</tr>
</tbody>
</table>

### Uniform use of measures

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variation between regions in the percentage of enterprises subjected to inspections or audits where nonconformities were identified about which decisions have been made (percentage points)</td>
<td>95–98%</td>
<td>95–98%</td>
<td>93–96%</td>
</tr>
<tr>
<td><strong>For selected areas:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinking water</td>
<td>90–100%</td>
<td>96–99%</td>
<td>95–100%</td>
</tr>
<tr>
<td>Animal welfare</td>
<td>92–98%</td>
<td>93–96%</td>
<td>90–96%</td>
</tr>
<tr>
<td>Fish health</td>
<td>95–100%</td>
<td>98–100%</td>
<td>95–99%</td>
</tr>
</tbody>
</table>

### SUPPORT AND ADMINISTRATIVE FUNCTIONS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient operations – Proportion of full-time equivalents used for administrative and support activities</td>
<td>42.40%</td>
<td>42.72%</td>
<td></td>
</tr>
<tr>
<td>HSE – Percentage sickness absence</td>
<td>5.25%</td>
<td>5.90%</td>
<td>5.77%</td>
</tr>
<tr>
<td>ICT – Uptime for the MATS electronic forms service</td>
<td>99.90%</td>
<td>99.95%</td>
<td>99.69%</td>
</tr>
</tbody>
</table>
APPENDIX 2 EFFECT INDICATORS

SAFE FOOD AND DRINKING WATER

Number and proportion of examined samples that contained illegal levels of contaminants (such as pesticide residues, dioxins, PCBs and pharmaceutical residues)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of samples</td>
<td>526</td>
<td>459</td>
<td>423</td>
</tr>
<tr>
<td>% of samples that exceed the limits</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Imports</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of samples</td>
<td>864</td>
<td>846</td>
<td>905</td>
</tr>
<tr>
<td>% of samples that exceed the limits</td>
<td>2.5</td>
<td>2.2</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: The Norwegian Food Safety Authority.

Number of reported shipments that have caused food allergies/intolerance due to reactions to undeclared allergens

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of shipments reported to the National Register of Severe Allergic Reactions to Food</td>
<td>159</td>
<td>135</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Register of Severe Allergic Reactions to Food, Norwegian Institute of Public Health.

Number of registered cases of illness following infection with Salmonella, Campylobacter, Yersinia, Shigella, Listeria, EHEC (Norwegian Surveillance System for Communicable Diseases)

<table>
<thead>
<tr>
<th>Disease</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacteriosis</td>
<td>1 114</td>
<td>1 147</td>
<td>1 365</td>
<td>882</td>
<td>951</td>
</tr>
<tr>
<td>E. coli (EHEC)</td>
<td>55</td>
<td>79</td>
<td>97</td>
<td>126</td>
<td>160</td>
</tr>
<tr>
<td>E. coli enteritis except EHEC</td>
<td>60</td>
<td>42</td>
<td>100</td>
<td>99</td>
<td>78</td>
</tr>
<tr>
<td>Listeriosis</td>
<td>26</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Salmonellosis</td>
<td>260</td>
<td>237</td>
<td>230</td>
<td>184</td>
<td>175</td>
</tr>
<tr>
<td>Shigellosis</td>
<td>11</td>
<td>17</td>
<td>12</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Yersiniosis</td>
<td>22</td>
<td>31</td>
<td>177</td>
<td>49</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1 548</td>
<td>1 571</td>
<td>2 001</td>
<td>1 363</td>
<td>1 425</td>
</tr>
</tbody>
</table>

Source: Surveillance System for Communicable Diseases (MSIS), Norwegian Institute of Public Health.

*The figures for 2016 have not yet been broken down by foreign/domestic infection (most recently updated on 7 March 2017).

Number of notifications sent of health hazards detected in food and feed on the Norwegian market (RASFF)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of RASFF notifications of findings associated with health hazards sent from Norway</td>
<td>50</td>
<td>34</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: European Rapid Alert System for Food and Feed (RASFF).
Percentage of the Norwegian population connected to waterworks with satisfactory analysis results for drinking water quality (E. coli, colour, turbidity and pH level)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. coli</td>
<td>96.4</td>
<td>97.6</td>
<td>98.2</td>
</tr>
<tr>
<td>Colour</td>
<td>93.7</td>
<td>97.3</td>
<td>96.6</td>
</tr>
<tr>
<td>pH level</td>
<td>86.8</td>
<td>90.9</td>
<td>90.3</td>
</tr>
<tr>
<td>Turbidity</td>
<td>95.6</td>
<td>95.7</td>
<td>98.2</td>
</tr>
</tbody>
</table>

Source: The industry’s reporting to the NFSA. There are no figures for 2016 as yet.

GOOD PLANT, FISH AND ANIMAL HEALTH

Number of outbreaks and cases of serious infectious diseases in farmed and wild fish

<table>
<thead>
<tr>
<th>Disease</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmed fish (salmonids)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISA</td>
<td>2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>VHS</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PD</td>
<td>3</td>
<td>142</td>
<td>137</td>
</tr>
<tr>
<td>PRVom* (virus Y)</td>
<td>-</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Furunculosis</td>
<td>3</td>
<td>1</td>
<td>0*</td>
</tr>
<tr>
<td>BKD</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Farmed fish (marine species)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Francisellosis</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>VNN/VER</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wild salmonids (river systems)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gyrodactylus salaris</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Furunculosis</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Crustaceans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crayfish plague (signal crayfish)</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: The Norwegian Veterinary Institute

* The virus was detected by means of PCR in selected locations as part of the MC programme, but the disease associated with the virus was not found.

** Aeromonas salmonicida subsp. salmonicida was isolated from sick lumpfish kept together with salmon in four facilities.

GOOD ANIMAL WELFARE

Number and proportion of animals that die during transport and lairaging in slaughterhouses, particularly poultry

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transport</td>
<td>Lairaging</td>
<td>Transport</td>
<td>Lairaging</td>
</tr>
<tr>
<td>Mammals, total</td>
<td>353</td>
<td>433</td>
<td>397</td>
<td>466</td>
</tr>
<tr>
<td>Cattle</td>
<td>11</td>
<td>11</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Sheep and goats</td>
<td>98</td>
<td>176</td>
<td>111</td>
<td>204</td>
</tr>
<tr>
<td>Pigs</td>
<td>244</td>
<td>246</td>
<td>282</td>
<td>254</td>
</tr>
<tr>
<td>Broiler chickens</td>
<td>89 835 – 0.13%</td>
<td>83 836 – 0.11%</td>
<td>62 514 – 0.10%</td>
<td></td>
</tr>
<tr>
<td>Turkeys*</td>
<td>977 – 0.09%</td>
<td>828 – 0.06%</td>
<td>795 – 0.06%</td>
<td></td>
</tr>
<tr>
<td>Chickens</td>
<td>757 – 0.19%</td>
<td>776 – 0.47%</td>
<td>403 – 0.15%</td>
<td></td>
</tr>
<tr>
<td>Other poultry**</td>
<td>949 – 0.13%</td>
<td>904 – 0.11%</td>
<td>570 – 0.12%</td>
<td></td>
</tr>
</tbody>
</table>
Loss of animals at pasture, number and proportion

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sheep at</td>
<td>523 496</td>
<td>550 497</td>
<td>546 138</td>
<td>557 032</td>
<td>582 725</td>
</tr>
<tr>
<td>pasture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of sheep lost</td>
<td>16 134</td>
<td>18 229</td>
<td>17 311</td>
<td>15 896</td>
<td>16 076</td>
</tr>
<tr>
<td>% sheep</td>
<td>3.08%</td>
<td>3.30%</td>
<td>3.20%</td>
<td>2.85%</td>
<td>2.76%</td>
</tr>
<tr>
<td>Number of lambs at</td>
<td>838 636</td>
<td>897 995</td>
<td>908 268</td>
<td>927 664</td>
<td>969 674</td>
</tr>
<tr>
<td>pasture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of lambs lost</td>
<td>62 118</td>
<td>69 508</td>
<td>62 509</td>
<td>60 549</td>
<td>58 840</td>
</tr>
<tr>
<td>% lambs</td>
<td>7.41%</td>
<td>7.70%</td>
<td>6.90%</td>
<td>6.53%</td>
<td>6.07%</td>
</tr>
<tr>
<td>Number of reindeer at</td>
<td>246 262</td>
<td>231 927</td>
<td>211 606</td>
<td>211 666</td>
<td>-</td>
</tr>
<tr>
<td>pasture*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of reindeer lost</td>
<td>96 887</td>
<td>98 229</td>
<td>93 323</td>
<td>68 606</td>
<td>-</td>
</tr>
<tr>
<td>% reindeer**</td>
<td>23%</td>
<td>25%</td>
<td>24%</td>
<td>19%</td>
<td>-</td>
</tr>
<tr>
<td>Of which reindeer calves</td>
<td>70 949</td>
<td>70 231</td>
<td>65 756</td>
<td>50 428</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: the Norwegian Agriculture Agency, including organised pasture husbandry, and the Norwegian Reindeer Husbandry Administration. This is based on information reported by the industry.

* The reindeer husbandry year starts on 1 April and ends on 31 March. The figures for reindeer are the figures as of 31 March of the calendar year in which the reindeer husbandry year ends.

** The loss percentage is calculated on the basis of the potential number of animals if there had been no loss and no reindeer had been slaughtered during the preceding reindeer husbandry year.

Number of animals used in experiments (total and for fish)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of experimental animals – fish</td>
<td>5 464 507</td>
<td>4 823 202</td>
<td>1 140 975</td>
</tr>
<tr>
<td>Number of experimental animals – other than fish</td>
<td>57 484</td>
<td>65 989</td>
<td>89 857</td>
</tr>
<tr>
<td>Total number of experimental animals</td>
<td>5 521 991</td>
<td>4 889 191</td>
<td>1 230 832</td>
</tr>
<tr>
<td>- of which painful experiments</td>
<td>182 134</td>
<td>234 395</td>
<td>167</td>
</tr>
<tr>
<td>Applications for field experiments</td>
<td>151</td>
<td>168</td>
<td>*</td>
</tr>
<tr>
<td>Applications for experiments in experimental animal units</td>
<td>779</td>
<td>760</td>
<td>*</td>
</tr>
<tr>
<td>Total number of applications</td>
<td>930</td>
<td>928</td>
<td>996</td>
</tr>
</tbody>
</table>

Source: The Norwegian Animal Research Authority and the Norwegian Food Safety Authority. There are no figures for 2016 as yet.

*Manual counting from the minutes of the Norwegian Animal Research Authority’s meetings in 2013 and 2014. No data are available for 2015.

HEALTH, QUALITY AND CONSUMER INTERESTS

Number and proportion of decisions pursuant to the national food information for consumers regulations in relation to the total number of decisions regarding foodstuffs

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of decisions pursuant to the national food information for consumers regulations</td>
<td>455</td>
<td>1 555</td>
<td>1 800</td>
</tr>
<tr>
<td>Proportion of decisions pursuant to the national food information for consumers regulations</td>
<td>4%</td>
<td>12%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: The Norwegian Food Safety Authority.

The number of supervisory activities pursuant to the national food information for consumers regulations was relatively high in 2016. The explanation for this is that supervision of allergens in non-prepackaged foods, regulated in the food information for consumers regulations, was included in the smiley inspections in 2016. Smiley inspections were also carried out in 2015, but far fewer than in 2016.
Number and proportion of samples that tested positive for Salmonella and samples in which the applicable limit values for undesirable substances were exceeded in relation to the total number of samples

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of samples</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>tested positive for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>undesirable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>substances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of samples</td>
<td>0.1%</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>tested positive for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>undesirable substances</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The Norwegian Food Safety Authority.

ENVIRONMENTALLY FRIENDLY PRODUCTION

Estimated risk associated with the use of pesticides

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (tonnes of</td>
<td>849</td>
<td>793</td>
<td>883</td>
<td>666</td>
<td>699</td>
</tr>
<tr>
<td>active agents)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales in % of 1996/197</td>
<td>116</td>
<td>109</td>
<td>121</td>
<td>91</td>
<td>96</td>
</tr>
<tr>
<td>Health risk in % of</td>
<td>89</td>
<td>79</td>
<td>91</td>
<td>77</td>
<td>75</td>
</tr>
<tr>
<td>1996/1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental risk in</td>
<td>89</td>
<td>80</td>
<td>114</td>
<td>72</td>
<td>80</td>
</tr>
<tr>
<td>% of 1996/1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The Norwegian Food Safety Authority.
APPENDIX 3 STATISTICS

PRODUCTION

Number of supervisory activities, in total and per supervision area, 2014-2016

<table>
<thead>
<tr>
<th>Supervisory area</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>By-products</td>
<td>183</td>
<td>126</td>
<td>137</td>
</tr>
<tr>
<td>Intermediate goods</td>
<td>557</td>
<td>548</td>
<td>644</td>
</tr>
<tr>
<td>Primary production involving land animals</td>
<td>27 615</td>
<td>28 080</td>
<td>27 504</td>
</tr>
<tr>
<td>Of which also pursuant to the Animal Welfare Act</td>
<td>12 648</td>
<td>13 402</td>
<td>13 531</td>
</tr>
<tr>
<td>Primary production involving aquatic animals</td>
<td>3 800</td>
<td>3 573</td>
<td>3 436</td>
</tr>
<tr>
<td>Primary production involving plants</td>
<td>1 837</td>
<td>1 349</td>
<td>1 035</td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>22 685</td>
<td>21 302</td>
<td>25 674</td>
</tr>
<tr>
<td>Of which slaughtering, butchering and production of meat</td>
<td>5 355</td>
<td>5 457</td>
<td>5 332</td>
</tr>
<tr>
<td>Of which seafood</td>
<td>1 970</td>
<td>1 902</td>
<td>1 676</td>
</tr>
<tr>
<td>Of which establishments that serve food and retailers</td>
<td>13 521</td>
<td>12 334</td>
<td>16 413</td>
</tr>
<tr>
<td>Of which other, foodstuffs</td>
<td>1 839</td>
<td>1 609</td>
<td>2 253</td>
</tr>
<tr>
<td>Drinking water</td>
<td>1 724</td>
<td>1 446</td>
<td>1 430</td>
</tr>
<tr>
<td>Imports</td>
<td>3 924</td>
<td>4 006</td>
<td>4 412</td>
</tr>
<tr>
<td>Border control</td>
<td>7 430</td>
<td>7 048</td>
<td>7 089</td>
</tr>
<tr>
<td>Exports</td>
<td>1 163</td>
<td>526</td>
<td>1 216</td>
</tr>
<tr>
<td>Other supervision</td>
<td>153</td>
<td>109</td>
<td>312</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>71 071</td>
<td>68 113</td>
<td>72 889</td>
</tr>
</tbody>
</table>

Number of certificates mv

<table>
<thead>
<tr>
<th>Supervisory area</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of certificates for the export of fish and seafood</td>
<td>46 063</td>
<td>45 080</td>
<td>47 944</td>
</tr>
<tr>
<td>Number of certificates for the export of land-based products</td>
<td>4 972</td>
<td>5 376</td>
<td>5 069</td>
</tr>
<tr>
<td>The number of products approved under the Protected Designation Scheme (as of 31 December)</td>
<td>25</td>
<td>26</td>
<td>29</td>
</tr>
</tbody>
</table>

RESOURCE USE

Available full-time equivalents show registered time during the year, not including time registered as holidays, sickness absence and leaves of absence. The number of available full-time equivalents will deviate from the number of full-time equivalents in the staffing statistics because the latter shows the number of positions converted into full-time positions at a certain time.

<table>
<thead>
<tr>
<th>Supervisory area</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>The NFSA as a whole</td>
<td>1,132.5</td>
<td>1,103.6</td>
<td>1,122.6</td>
</tr>
<tr>
<td>Head office</td>
<td>267.6</td>
<td>274.3</td>
<td>270.9</td>
</tr>
<tr>
<td>Regions</td>
<td>865.0</td>
<td>829.3</td>
<td>851.7</td>
</tr>
</tbody>
</table>
### Number of available full-time equivalents per county

<table>
<thead>
<tr>
<th>Fylke</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oslo</td>
<td>197.0</td>
<td>191.9</td>
<td>198.8</td>
</tr>
<tr>
<td>Akershus</td>
<td>93.2</td>
<td>83.7</td>
<td>94.8</td>
</tr>
<tr>
<td>Østfold</td>
<td>36.3</td>
<td>34.4</td>
<td>25.8</td>
</tr>
<tr>
<td>Hedmark</td>
<td>103.8</td>
<td>101.8</td>
<td>97.5</td>
</tr>
<tr>
<td>Oppland</td>
<td>27.3</td>
<td>27.5</td>
<td>33.4</td>
</tr>
<tr>
<td>Buskerud</td>
<td>33.9</td>
<td>37.3</td>
<td>35.5</td>
</tr>
<tr>
<td>Vestfold</td>
<td>28.0</td>
<td>29.6</td>
<td>28.5</td>
</tr>
<tr>
<td>Telemark</td>
<td>25.3</td>
<td>22.0</td>
<td>23.4</td>
</tr>
<tr>
<td>Aust-Agder</td>
<td>11.6</td>
<td>9.0</td>
<td>11.8</td>
</tr>
<tr>
<td>Vest-Agder</td>
<td>11.8</td>
<td>15.1</td>
<td>15.6</td>
</tr>
<tr>
<td>Rogaland</td>
<td>115.8</td>
<td>110.0</td>
<td>111.8</td>
</tr>
<tr>
<td>Hordaland</td>
<td>75.3</td>
<td>79.0</td>
<td>79.8</td>
</tr>
<tr>
<td>Sogn og Fjordane</td>
<td>34.1</td>
<td>30.4</td>
<td>35.2</td>
</tr>
<tr>
<td>Møre og Romsdal</td>
<td>47.5</td>
<td>49.6</td>
<td>49.2</td>
</tr>
<tr>
<td>Sør-Trøndelag</td>
<td>69.8</td>
<td>65.3</td>
<td>65.7</td>
</tr>
<tr>
<td>Nord-Trøndelag</td>
<td>52.8</td>
<td>53.8</td>
<td>54.6</td>
</tr>
<tr>
<td>Nordland</td>
<td>93.5</td>
<td>87.7</td>
<td>84.7</td>
</tr>
<tr>
<td>Troms</td>
<td>36.9</td>
<td>39.5</td>
<td>42.8</td>
</tr>
<tr>
<td>Finnmark</td>
<td>38.5</td>
<td>36.2</td>
<td>33.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1 132.5</td>
<td>1 103.6</td>
<td>1 122.6</td>
</tr>
</tbody>
</table>

### Number of full-time equivalents total and process

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>1 132.5</td>
<td>1 103.6</td>
<td>1 122.6</td>
</tr>
<tr>
<td>Development of regulations</td>
<td>42.9</td>
<td>37.9</td>
<td></td>
</tr>
<tr>
<td>Supervision</td>
<td>476.8</td>
<td>484.4</td>
<td></td>
</tr>
<tr>
<td>Communication and guidance</td>
<td>68.0</td>
<td>73.3</td>
<td></td>
</tr>
<tr>
<td>Gathering knowledge and analysing status</td>
<td>47.5</td>
<td>47.5</td>
<td></td>
</tr>
<tr>
<td>Managing the NFSA</td>
<td>245.8</td>
<td>243.7</td>
<td></td>
</tr>
<tr>
<td>Supporting the NFSA</td>
<td>222.6</td>
<td>235.9</td>
<td></td>
</tr>
</tbody>
</table>

### Number of full-time equivalents for supervisory visits per area (disciplines/activities)

<table>
<thead>
<tr>
<th>Supervisory area</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>By-products</td>
<td>2.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate goods</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary production involving land animals</td>
<td>119.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary production involving aquatic animals</td>
<td>35.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary production involving plants</td>
<td>13.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>153.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

4 The figures for 2015 and 2016 are not comparable with figures for previous years due to changes in the structure of measures.
5 Number for each process are not available.
6 The figures for 2015 are not comparable with figures for previous years due to the new structure of measures and method for conversion to full-time equivalents.
We have made changes to both the organisation and the structure of measures, and the proportional breakdown from and including 2015 will differ from previous years. The structure of measures was not developed to document time used per discipline. In cases where a measure is aimed at several disciplines, the activity is attributed to the discipline that is considered most relevant. Time that cannot be directly attributed to a discipline has been proportionately divided.

**Number of available full-time equivalents per discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>354.0</td>
<td>331.3</td>
<td>344.1</td>
</tr>
<tr>
<td>Aquaculture and seafood</td>
<td>150.3</td>
<td>191.2</td>
<td>201.1</td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>557.2</td>
<td>529.7</td>
<td>532.2</td>
</tr>
<tr>
<td>International work and development of regulations</td>
<td>71.1</td>
<td>51.3</td>
<td>45.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 132.5</strong></td>
<td><strong>1 103.6</strong></td>
<td><strong>1 122.6</strong></td>
</tr>
</tbody>
</table>
The NFSA’s expenses seen in relation to fee revenues

<table>
<thead>
<tr>
<th>Key figures</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee revenues as a proportion of total expenses (%)</td>
<td>10.7</td>
<td>10.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Fee revenues as a proportion of the calculated self-cost (%)</td>
<td>58.4</td>
<td>51.1</td>
<td>52.3</td>
</tr>
</tbody>
</table>

Fee revenues and calculated operating expenses per fee in 2016
The expenses have been calculated on the basis of net expenses recognised in the accounts and registered time used, with the exception of fees for further official control, for which the time used has been estimated. Resource use for non-discipline-specific activities has been proportionately divided. It is taken into account in the calculation, on the basis of a discretionary assessment, that slaughterhouses put premises etc. at the disposal of NFSA personnel in connection with meat control.

STAFFING
The full-time equivalents figures show the number of positions (permanent, substitute and temporary employees) converted to full-time positions, and include employees on paid leave of absence. The figures for 2014 and 2015 reflect the situation at year end, while the figure given for 2016 is an average calculated on the basis of several counts carried out at different times. The figure for 2015 is thus not directly comparable with the figures for preceding years.

Number of equivalents total, national and regional level in NFSA

<table>
<thead>
<tr>
<th></th>
<th>End of 2014</th>
<th>End of 2015*</th>
<th>Average 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equivalents total</strong></td>
<td>1 281</td>
<td>1 257</td>
<td>1 255</td>
</tr>
<tr>
<td>Equivalents national level</td>
<td>293</td>
<td>310</td>
<td>301</td>
</tr>
<tr>
<td>Equivalents regional level</td>
<td>141</td>
<td>947*</td>
<td>955</td>
</tr>
<tr>
<td>Equivalents local level</td>
<td>847</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From 2015 the NFSA had two administrative levels.

Recruitment and employee turnover

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>3.2%</td>
<td>4.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Average time of pension, years</td>
<td>65.7</td>
<td>66.2</td>
<td>66.6</td>
</tr>
</tbody>
</table>

7 Key figures have been calculated on the basis of invoiced fees, instead of earlier on the basis of paid fees. The figures for 2014 and 2015 are not comparable with the numbers in our annual report for 2015.
### Inclusive workplace

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees from immigrant backgrounds</td>
<td>74</td>
<td>70</td>
<td>72</td>
</tr>
<tr>
<td>Number of applicants from immigrant backgrounds</td>
<td>58</td>
<td>55</td>
<td>97</td>
</tr>
<tr>
<td>Number of employees with functional impairments</td>
<td>12</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Number of applicants with functional impairments</td>
<td>0</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Apprentices under contract with the Norwegian Labour and Welfare Administration</td>
<td>5</td>
<td>15</td>
<td>27</td>
</tr>
</tbody>
</table>

### Status reporting on equality

(See Table 1 in the guide Statlige virksomheters likestillingsredegjørelser etter aktivitets- og rapporteringsplikten (‘Government agencies’ statements of equality pursuant to the obligation to actively promote and report on equality’ – in Norwegian only))

<table>
<thead>
<tr>
<th>Status reporting (gender)</th>
<th>Gender balance</th>
<th>Payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
<td>F %</td>
</tr>
<tr>
<td>Total in the agency</td>
<td>32.2%</td>
<td>67.8%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>33.2%</td>
<td>66.8%</td>
</tr>
<tr>
<td>Senior management</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Middle managers</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>Category 1 (senior advisers, senior/special inspectors and project managers)</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>Category 2 (advisers, senior inspectors)</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>Category 3 (senior/higher executive officers, inspectors)</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>27%</td>
<td>73%</td>
</tr>
<tr>
<td>Category 4 (executive officers, cleaners)</td>
<td>7%</td>
<td>93%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Paid by the hour, incl. retired employees</td>
<td>41%</td>
<td>59%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>65%</td>
<td>35%</td>
</tr>
</tbody>
</table>

### Status reporting (gender)

<table>
<thead>
<tr>
<th>Status reporting (gender)</th>
<th>Gender balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
</tr>
<tr>
<td>Total in the agency</td>
<td>32.2%</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>33.2%</td>
</tr>
<tr>
<td>Part-time</td>
<td>2.9</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>3.4</td>
</tr>
<tr>
<td>Temporary employees</td>
<td>1.8</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>0.7</td>
</tr>
<tr>
<td>Parental leave</td>
<td>0</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>0.2</td>
</tr>
<tr>
<td>Sickness absence</td>
<td>4.3</td>
</tr>
<tr>
<td>Last year (2015)</td>
<td>4.8</td>
</tr>
</tbody>
</table>