

Strategy

# Strategy for a competitive Norwegian aquaculture industry



NORWEGIAN MINISTRY OF  
FISHERIES AND COASTAL AFFAIRS

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## **Introduction**

Norway has a long coastline of clean, fresh seawater that provides the best conditions possible for the operation of sustainable aquaculture activities. In addition, Norway is among the foremost in the world with respect to expertise related to operation, technology, and research and development in the field of aquaculture. We also have proximity to our main markets, providing good opportunities to supply fresh fish.

While Norway has many advantages as an aquaculture nation, there is also a high cost level and a regulatory regime that places limitations on players. In addition macro-economic factors such as the exchange rate of the Norwegian krone (NOK) play an important role in an industry that exports approximately 95% of its production. The framework conditions in Norway relative to those in competing countries are an important element for a competitive Norwegian aquaculture industry. The producers can move production and establish themselves where conditions are most profitable and access to suitable areas is best.

The Government aims to make sure that Norwegian aquaculture will maintain its position as a leading international producer and exporter. To secure this, it is imperative that the Norwegian industry has competitive framework conditions. Research and development will strengthen the basis for further development of the industry. Safeguarding the environment and fish health concerns must be taken care of. In addition market access is decisive for the Norwegian aquaculture industry to be able to export on an equal footing with its competitors.

The Soria Moria Declaration<sup>1</sup> states that the Government will review the competitive conditions for the aquaculture industry. The Declaration paves the way for a lower ceiling for ownership and states that any new concessions should have as a goal to strengthen small and medium-sized players. Furthermore, several possible new moves in aquaculture policy are mentioned, among others an assessment of concession charges to municipalities and increased marine research efforts.

The Norwegian Agricultural Economics Research Institute (NILF) and Kontali Analyse AS were hired to carry out a comparative analysis of the relative competitive conditions for the aquaculture industries of Norway, Scotland and Chile. The study has been part of the foundation for the Government's work with this strategy.

Salmon and trout constitutes the main part of the Norwegian aquaculture industry, but the farming of marine species, shells and so forth, as well as sea ranching, are developing well. This strategy embraces the entire aquaculture industry, but part of the concrete assessments and policy changes apply to salmon and rainbow trout, as they comprise the bulk of the Norwegian aquaculture industry today. Under the aquaculture legislation, salmon and trout are under a special regulation that does not apply to other species.

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<sup>1</sup> The Soria Moria Declaration is the political platform for the current Norwegian Government.

**The aquaculture industry contributes positively to development and activity along the entire coastline. The Government wants this to continue and has had this as the backdrop for this strategy.**

# **1. Norwegian aquaculture in a global perspective**

The development of the Norwegian aquaculture industry from the 1970s until today has been like a modern fairytale. Despite periods of adversity, the industry has managed to resurrect and has shown the will to continuously adapt to changed conditions. The industry has shown that it is competitive in a demanding international market. For Norway to keep its international position, good framework conditions and competitive terms are important.

## ***The development of production in Norway, Chile and Scotland***

The three main producers of salmon are Norway, Chile and Scotland. In 2006, Norway's share of the entire salmon production amounted to just above 50%. Since its beginnings, the global production of Atlantic salmon grew to 58,000 tonnes in 1986, and thereafter there has been a continuous growth up to 2006, when the total production globally amounted to 1,149,000 tonnes. Growth with respect to rainbow trout has been lower, but also here there has been significant growth from a production of about 25,000 tonnes in 1980 to about 220,000 tonnes in 2005. Chile is the largest producer of trout with about 50% of the production while Norway's share is about 25%. The production of Atlantic salmon in Scotland in 2005 was 119,700 tonnes.

Atlantic salmon and rainbow trout make up a modest share of the global production of farmed fish, but are among the best-paid and most exclusive products. Efforts to market Norwegian seafood have thus been extremely important in ensuring that the products continue to maintain an exclusive market position, giving them the highest possible value.

## ***The international market for Atlantic salmon and rainbow trout – global and regional competition***

The most important types of salmon that are offered in the global market are Atlantic salmon, Pacific Ocean salmon and rainbow trout. In some markets, different salmon products can replace one another. It is therefore profitable to build preferences for Norwegian salmon and Norwegian trout to ensure the greatest possible market share and best possible price.

Another important division is between fresh and frozen products. These compete in the regional and global markets respectively, due to the high transport costs for the airfreight of fresh fish. Two-thirds of Norwegian salmon is exported to the EU. Russia has become a new and important market for Norwegian seafood, and the growth in exports of salmon and rainbow trout have been significant. Our proximity to the EU and Russia makes Scotland our only competitor for fresh, farmed salmon and trout. However, some of the Scottish production is based on ecological operations. This implies that Scottish salmon to a certain degree is competing in a different market segment than the salmon produced in Norway. Chile has an advantage in the form of its proximity to the American market.



Norway has the advantage of being close to EU and Russia. In addition there is a relatively equal competitive situation for frozen products. Despite this, Norway has lost market shares to Chile for Atlantic salmon in the EU, Russia and Japan during the period from 1997 to 2006. There are several reasons for this. Chile has had a cost advantage in relation to Norway for its frozen products. In addition, the country has better expertise when it comes to frozen, processed products. In some markets they also have better conditions for market access. Scotland's role as a competitor is first and foremost linked to production occurring within the EU, where Norway has its main market.

The market for frozen fish products is far more global than the market for fresh fish. Frozen products can be transported by boat, and this reduces freight costs considerably. A challenge for fresh salmon is good, cheap, frozen products. Even if frozen and fresh salmon do not directly replace one another (are substitutes), there is a limit as to how much more expensive fresh salmon can become before consumers select the frozen product instead.

The global demand for seafood is continuously increasing and according to FAO, it will have to be covered by aquaculture. A scarcity of marine raw materials for feed would be a limiting factor in salmon farming. Much of the increase in aquaculture today comes from other species such as tilapia, pangasius and warm-water shrimp produced in Asian countries.

## **2. Market challenges**

An important task for the authorities is to ensure that Norwegian products have as free access as possible to relevant markets. The aquaculture industry is to a significant degree directed toward export. Even small changes in tariff rates in important export markets can be crucial.

### ***Market access and trade barriers***

Norwegian trade policy is built on three main pillars: the World Trade Organisation (WTO), the EEA Agreement and EFTA's free trade agreements. The conditions Norway achieves for market access through these agreements are decisive for the aquaculture industry's competitive situation and for enabling the industry to fulfil its value creating potential.

Aside from membership in the WTO, Norway, Chile and the UK (Scotland) have chosen different trade policy strategies. Norway has the EEA Agreement with the EU as well as a number of free trade agreements through EFTA. Chile has chosen to enter into bilateral trade agreements, while the UK is a member of the EU where they also sell the most substantial part of their farmed salmon. This results in different competitive conditions in each individual market. In order for Norway to be able to keep its leading position as a producer and exporter internationally, it is dependent on good market access. An objective should therefore be that Norwegian aquaculture products have equally as good market access as Chilean and Scottish products.

Chile has a pro-active free trade policy and has in some markets better trade conditions than Norway. For example, the Chilean salmon is exempted from custom duties when entering the EU. In addition, Chile is a low cost country where processing companies have a cost level with which Norway cannot compete. For the time being industry in Chile is struggling with certain problems, but once these problems are overcome, Chile will have competitive advantages in several areas compared to Norway.

The industry in Norway has however the important advantage that it is in geographical proximity to the most important markets in Europe and in Russia. Maintaining consumer conviction that Norwegian salmon is of high quality is very important for Norwegian salmon's competitive ability in the future.

In the autumn of 2007, a trade policy matter that is important for Norway will be settled<sup>2</sup>. As a member of the WTO, we have the opportunity of addressing disputes with other member countries. We are currently expecting a decision from the WTO's dispute settlement mechanism in the matter concerning trade in salmon between Norway and the EU. Significant resources have been used in this matter because it will hopefully contribute to finally settling a long-term and resource-demanding dispute with

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<sup>2</sup> WTO published the panelreport on 16. November 2007

the EU. It is also a matter of principle because it shows that a small country such as Norway has the same rights as the large trade blocks in the WTO in such cases.

The import customs duty on seafood is important for the competitive situation in each individual market. Norway prioritises multilateral solutions and is in ongoing negotiations in the WTO's Doha round, which is among other things concerned with getting better market access for seafood. In parallel with this, work on other trade agreements is also being intensified, primarily through EFTA. Here, on the Norwegian side, we have been concerned with prioritising countries that are important for the seafood industry, such as Japan, China and India – and Russia, when this country joins the WTO as a member.

Ever since Russia at the turn of the year 2005/2006 introduced restrictions on the import of farmed fish from Norway, the Norwegian authorities have worked continuously on the case. In the short term, the goal has been to reach solutions to ensure that Norwegian export of salmon and rainbow to Russia is not hindered. This has included inspection of all companies that want Russian certification. In the long term, the goal is to attain normal frameworks for the seafood trade between Norway and Russia. This would entail gaining acceptance of the Norwegian Food Safety Authority's supervision of food producers and products in Norway and for export. This work must also be seen in the light of the negotiations surrounding Russia's membership in the WTO.

The Government will:

- prioritise efforts in the WTO;
- focus strongly on the efforts to enter into free trade agreements with important markets;
- work to ensure that the Russian authorities acknowledge supervision by the Norwegian Food Safety Authority.

### ***Reputation***

Reputation reflects the surrounding's perception of the aquaculture industry, and is extremely important for competitiveness in both a short and long term perspective. The industry and the authorities must be prepared to tackle critical accusations and serious events by providing information about the facts. In this way we can ensure that reactions in the market are the result of factual conditions. A reduction of goodwill in opinions and in consumers can lead to a loss in turnover in both the export and home markets. Today, the Norwegian aquaculture industry has a clear environmental profile and well-functioning regulatory and governance systems. There are however several important challenges. If the industry can show that it has a proactive attitude and works towards the aim of reducing the negative effects of its activities, this will give a positive impression of the industry in public opinion.

What some may see as stringent Norwegian regulations and sanctions are perceived by others as necessary – and can thereby enhance the industry's reputation. The

authorities contribute to the need for information by making relevant information available on the Internet at [www.fisheries.no](http://www.fisheries.no). This is an English-language website where the latest information about Norwegian fisheries, aquaculture and food safety for seafood is published.

The Government will:

- contribute to sustaining consumer awareness of the high quality maintained by Norwegian seafood production.

### ***The Norwegian Seafood Export Council***

Norwegian seafood has had a reputation for quality for generations. The export of dried fish or stockfish and salted and dried cod has long held an honourable place in Norwegian fishing history, based on good handicraft. An understanding of the importance of quality has been continued into the new era in which aquaculture has been developed. Since the 1980s, Atlantic salmon from Norway has been marketed as Norwegian salmon, and Norwegian salmon continues to be a strong brand.

Norwegian salmon competes for the consumers' preference in a global food market. In order to strengthen the marketing of Norwegian seafood, the Norwegian Seafood Export Council (EFF) was established in 1991. The EFF is responsible for the joint marketing of Norwegian seafood in all the important markets in order to create an increased preference for Norwegian products. The EFF also represents the fishing industry in relevant markets in matters that can affect the reputation of Norwegian seafood. As of 2005, the EFF is organised as a government limited liability company under the Ministry of Fisheries and Coastal Affairs, and is financed by an export charge that is added to all exports of Norwegian seafood. To ensure that the EFF's activities occur in close cooperation with seafood enterprises, the board is comprised of representatives from the industry.

The seafood industry consists of many small and medium-sized enterprises that do not have the resources to carry out international marketing on their own. Combined with the fact that the strongest brands in the Norwegian seafood industry are linked to origin (e.g. Norwegian salmon and Norwegian salted and dried cod), it has proven profitable for the seafood industry to carry out common origin marketing. As more private brands are developed, these will contribute to an already existing good reputation for Norwegian seafood in the market.

It is the Government's intention:

- that the Norwegian Seafood Export Council AS shall be a useful body for the joint marketing of Norwegian seafood.

### **3. Sustainable growth and safe seafood**

A sustainable aquaculture industry is an industry that is competitive, market-oriented, and environmentally- and resource-friendly, and that supplies safe seafood of good quality. This is taken care of by means of public regulations and surveillance combined with accompanying sanctions. Norway has relatively stringent administrative regimes in these areas.

To an increasing extent, and rightly so, consumers demand that seafood satisfies their preferences for responsible environmental and resource management as well as safety and quality preferences.

#### ***Environmental concerns***

The issue of an environmentally friendly production concerns several questions. What influence does the industry have on the environment? How does it adapt itself to a situation where consumers give increasingly more significance to the environment? What is the industry's ability to communicate these issues?

The environmental status of the aquaculture industry is generally good. The environmental effects relatively speaking have become less over time. This is a result of the comprehensive efforts carried out in administration and in research and development in the industry. A fundamental condition for further growth is that the aquaculture industry is sustainable. This is the responsibility of both the industry and the authorities, and teamwork is important to achieve continuous improvements.

The Government will:

- ensure that the Norwegian aquaculture industry is operated in a sustainable manner.

#### ***Escaped fish***

The escape of fish from fish farms is the most serious negative environmental consequence of aquaculture today. In addition, it weakens the industry's reputation and thereby its competitiveness. The authorities have focused on developing governing tools and regulations, operational requirements and control schemes to limit the problem. As part of this, a new regulation concerning consequences has been adopted. Among other things this entails intensifying the consequences of violations of the regulations that affect the environment, including escaped fish.

Preventing the escape of fish is a responsibility that to a significant extent the industry itself must accept. The industry is expected to intensify its efforts to prevent escapes, so that the escape figures of recent years can be significantly reduced.

The fish authorities have launched "Vision No Escapees", which contains a series of measures. The overriding goal is that the level of escapees from fish farms shall be as close to zero as practicable. Along with the establishment of 52 national salmon

watercourses and 29 national salmon fjords, a more stringent regime for aquaculture activities has been adopted in consideration of wild salmon. This includes more stringent requirements for the prevention of escapes and of the spread of disease.

In 2006, a permanent escape commission was appointed. The commission will, among other things, analyse the causes for escapes and systematically work to reduce the risk and propose changes in standards and regulations. The commission will look at new individual events, previous escapes and “near escapes”.

The Directorate of Fisheries publishes escape lists on the Internet. The Directorate of Fisheries' escape figures as at 1 August 2007 amount to 243,000 salmon/trout and 77,000 cod. This is a significant reduction compared to the same period in 2006 when the corresponding figures were 654,000 salmon/trout and 197,000 cod. This positive development must continue.

If the industry does not gain control over the high escape figures, the authorities will evaluate further measures. This includes the use of sterilised fish, and the development of methods for marking fish so that they may be traced back to their original location. DNA identification seems to be particularly suited to identifying where escaped fish come from, and the method has so far showed promising results.

The Government will:

- follow up “Vision No Escapees” with the aim of securing that escapes do not take place.

### ***Restoring aquaculture sites***

Deficient restoring of aquaculture sites after farming activities is an environmental and sea safety issue, which also harms the industry's reputation. It is those involved in the industry that are responsible for ensuring the restoring, but the Government will have to evaluate public measures if this does not function efficiently.

The Ministry of Fisheries and Coastal Affairs introduced collateral security requirements for new blue mussel permits. These requirements will ensure that there are the financial means available to carry out restoring of sites once the farming activities cease. The size of the security will depend on the size of the site, but it will be as much as is necessary to cover a complete restoring of the location and adjacent area.

In connection with the introduction of the collateral security requirements, the authorities have had a close dialogue with the industry to find solutions that will result in the least possible burden on participants in the industry. Thus, the industry is also invited to make proposals for a joint scheme – possibly financed by means of a statutory charge. The industry has accepted the challenge. If such a scheme is put in place, today's scheme where the individual provides security will be revoked.

The Government will:

- enter into dialogue with the industry's organisations based on their proposal for an industry-financed fund for restoring aquaculture sites.

### ***Good fish health***

The health of the fish is significant for profitability in the aquaculture industry, fish welfare, the environment and market access. Diseases among farmed fish can lead to the infection of wild fish and in this way it can affect biological diversity. Infestations of salmon lice are an example of this. If the disease's contagiousness requires that the fish be treated with medicines, this can also lead to pollution of water masses and sediments.

The disease situation and knowledge of how various diseases can be prevented and fought develop over time. There is an increased focus on administrative measures being uniform, predictable and in relation to need. The Ministry of Fisheries and Coastal Affairs therefore has started a process of reviewing and developing action plans/control plans for important fish diseases. As a basis for such work, a system has also been put in place to define and monitor which diseases that over time affect fish health to such an extent that there is a basis for measures under either public or private direction. The Government has the main responsibility for preventing the most serious diseases by means of regulations, while the industry must take responsibility for the less serious diseases by means of its own action plan or Code of Practice.

The Government will:

- undertake a complete review and revision of the fish health rules and regulations, and develop action plans for the most serious diseases.

### ***The economic burdens of combating fish diseases***

To fight diseases in fish farming, the authorities in certain cases may issue an order to slaughter the fish. The Norwegian Food Safety Authority gives orders to slaughter predominantly for infectious salmon anaemia virus (ISAV). The number of orders to slaughter in the last 10 years have been at between four and 20 cases annually. For those who receive such orders, the economic burden can be considerable. The individual fish farmer today can purchase insurance against the disease, which most fish farmers do. Including insurance, own risk, which normally amounts to 40%, is estimated to be about 4-8 million NOK per outbreak of the disease.

The Norwegian Food Safety Authority's order to slaughter may be perceived to be a sacrifice on behalf of the community, since slaughter is done first and foremost to prevent infection from spreading to other sites.

It is therefore relevant to evaluate further measures that can contribute to reduce the economic loss for the individual and redress a situation that may have occurred through no fault of one's own. This could also be an incentive to report the disease outbreak as

soon as possible. It should in any case not be provided full coverage to make sure that an incentive remains to prevent disease and ensure good fish health.

The Government will:

- enter into a dialogue with industry organisations regarding the establishment of a community solution by putting in place an industry-financed fund for partial coverage of the fish farmer's own risk linked to insurance.

This type of scheme will only be possible if there is broad concurrence among fish farmers. It should be a supplement to the research schemes so that it can be aimed at the partial coverage of own risk. It must also apply to all species and illnesses where the Norwegian Food Safety Authority orders slaughter, and be obligatory for everyone in the industry. In other words, it must be fully financed by the industry by means of a statutory charge.

### ***Fish welfare***

Ensuring that food is produced under acceptable ethical conditions is becoming a stronger demand from consumers. This is a demand that must be taken seriously.

The Government is working on the follow up of Report no. 12 to the Storting (2002-2003) concerning animal husbandry and animal welfare<sup>3</sup>. This work significantly reforms and increases the administrative focus on fish and fish welfare. There have been examples of the uncritical transfer of knowledge about routines for animal husbandry to routines for how fish should be handled in fish farming. This is not possible because it is a question of different biology. Because of this, continuous efforts are being made with a view to ensuring the welfare of farmed fish in the farming phase, under transport and when harvesting.

The Ministry of Fisheries and Coastal Affairs sees the need to increase research in the field to clarify welfare indicators that are relevant and appropriate in relation to the biology of fish and other farmed species.

The Government will:

- ensure that Norwegian farmed fish is produced in an ethically responsible manner;
- prioritise the development of relevant welfare indicators for farmed fish.

### ***Safe seafood and its effects on health***

Norwegian seafood shall be safe, healthy, tasty and of the right quality. This is a demand from consumers that is absolute. It is the consumers' demands that the industry must respond to. If the industry fails on this decisive point, the market will open to nations that compete with us. Trust in a product is something that takes a long time to establish but can be destroyed in no time at all.

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<sup>3</sup> Stortingsmelding nr. 12 (2002-2003) om dyrehold og dyrevelferd



The Norwegian authorities are working systematically through research, surveillance and monitoring to document that Norwegian seafood is safe. The regulations for seafood safety in Norway are formulated in accordance with an international development that is expressed among other things in the EEA Agreement and agreements linked to the WTO. This development is based on independent risk assessments from responsible knowledge-based institutions nationally and internationally.

In spring 2006, the Norwegian Scientific Committee for Food Safety presented the report *Et helhetssyn på fisk og annen sjømat i norsk kosthold* [A comprehensive view of fish and other seafood in the Norwegian diet].<sup>4</sup> It concludes among other things that an increased consumption of fatty fish types is desirable, especially for those who eat little fatty fish and for the half of the population that eats least fish. Acknowledged research environments can also document that fish and seafood have beneficial effects on health.

The Government will:

- arrange for increased consumption of seafood among the population, especially among children and young people.

### ***Foreign substances***

The content of foreign substances in Norwegian fish and seafood is monitored to ensure that products are safe to eat in terms of health. An important part of the documentation is gathered in a separate database at the National Institute of Nutrition and Seafood Research (NIFES). This database is under continuous development. Work on surveillance and documentation of product quality will be coordinated with sea surveillance.

Norway complies with EU regulations with respect to contaminants such as dioxins and PCBs. In recent years the limits for dioxins and PCB's in food, including seafood, have been lowered and they will continue to be reduced. The EU limits are set according to public health standards recommended by WHO and are based on what is considered advisable with respect to health by scientific public health assessments. The values in Norwegian fish lie below the limits set by the EU based on health recommendations from WHO.

The Norwegian Scientific Committee for Food Safety states in its report *A comprehensive view of fish and other seafood in the Norwegian diet* that eating seafood is healthy and that a higher consumption of seafood in the public's diet is desirable. At the same time the committee states that a continued reduction in the level of foreign substances in fish and other seafood is to be recommended. The Norwegian Food Safety Authority, the Norwegian Scientific Committee for Food Safety and responsible knowledge-based institutions contribute to disseminating facts about seafood and foreign substances to consumers and various markets.

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<sup>4</sup> See: [http://www.vkm.no/eway/default.aspx?pid=0&oid=-2&trg=\\_\\_new&\\_\\_new=-2:17473](http://www.vkm.no/eway/default.aspx?pid=0&oid=-2&trg=__new&__new=-2:17473)

Measures under the Government's action plan for a better public diet have helped in making the positive health effects of increased seafood consumption visible, and have contributed to the increased consumption of seafood among the population – especially among children and young people.

### ***Electronic traceability***

Electronic traceability is an important tool to ensure that food that presents a health risk is rapidly removed from the market. Electronic traceability will also make it possible to trace fish that is legally caught, and thus avoid a situation where consumers are offered illegally caught fish. Good electronic traceability systems can help the industry to minimise costs if goods must be pulled from the market. In addition, there are benefits to be had because traceability systems can be used to optimise value chains. More and more markets are asking for more comprehensive electronic traceability.

To establish a system of electronic traceability in the entire value chain, it is very important that all the segments of the value chain implement systems that can communicate with one another. The authorities are now working together with the industry to ensure that the implementation of electronic traceability in different food chains is built on compatible systems. This is being done through the E-traceability project, with cooperation among the Ministry of Fisheries and Coastal Affairs, the Ministry of Health and Care Services and the Ministry of Agriculture and Food. The respective segments are active participants in the project. To begin with, pilot projects are being carried out in different food chains. Experience from these projects will later be used in an expansion of the traceability systems to other enterprises and food chains.

The Government will:

- contribute to the establishment of a national electronic infrastructure for the efficient exchange of information and traceability in the food chain by 2010.

## **4. A future-oriented aquaculture policy**

The aquaculture industry is primarily a district industry, located along the entire coast. At a time where the rural areas experiences vacation and shutting down of workplaces, it is particularly gratifying that aquaculture is a coastal-based industry that contributes to a belief in the future for small coastal communities. The Government aims to pave the way for competitive framework conditions that will ensure value creation and workplaces along the coast in the future. Today about 4,500 people are directly employed in Norwegian aquaculture. In 2006, the total value of exported seafood amounted to NOK 35.6 billions, and for the first time aquaculture exceeded the export of wild fish in value. In addition, there are the extended effects that amounts to about NOK 42 billions and employs some 18,500 people. All in all this makes aquaculture a very important industry for many local communities along the coast.

### ***Adequate regulations***

The aquaculture industry is dependent on comprehensive regulations that ensure the concerns for the environment, fish health, profitability and value creation along the coast. Aquaculture legislation and appurtenant regulations have gone through several amendments during the last decades.

The Aquaculture Act, which entered into force on 1 January 2006 continues the main elements of previous fish farming and sea ranching legislation, but also introduces new elements in the form of simplifying and a change of focus on what the legislation should have as its aim. It also strengthens and gathers environmental provisions into a separate chapter. Among other things, licences have been made transferable and the Aquaculture Register was established at Brønnøysund.

The Act distinguished between:

- salmon licences (for salmon, trout or rainbow trout as food) – which are limited in number, can be distributed regionally and can be linked to industry or regional policy conditions, and
- other licences (for marine species, shellfish etc. and hatchery-produced fish for stocking) – which are granted consecutively unless special legislation (traffic, fish health, pollution etc.) or other concerns prevent this.

The licences are limited in terms of maximum allowed biomass (MAB). A standard salmon licence, for example, is for 780 tonnes MAB up to, and including, Nordland and 900 tonnes MAB in Troms and Finnmark.

Today's system for salmon licences (for grow out farmed salmon, trout or rainbow trout) consists of two groups of licences:

- non-commercial licences that comprise brood stock, research, educational and exhibition licences, and
- ordinary commercial licences:

<b>Community</b>	<b>Ordinary</b>
Limited in time linked to purpose	Unlimited by time
Free	Compensation for new allocations
Requirements for special, community-related purposes	Commercial purposes (grow out production)
Terms and conditions linked to the respective purposes	Regional and industry policy criteria and terms and conditions for new licences
Transferable	Transferable

A scheme of few licence groups ensures a readily understood and predictable system.

The Government will:

- continue today's bipartite licensing system for salmon, trout and rainbow trout – without new licence classes.

### ***Brood stock licences (salmon and trout)***

In June 2007, a proposal for a new administrative model for brood stock licences was sent out for comment (public inquiry). Based on the comments received, on 14 August 2007 the Ministry of Fisheries and Coastal Affairs enacted regulations introducing a new licensing scheme for brood stock – designed as a new allocation and control system. The goal is to ensure that the holder will have a sufficient economic and breeding-related foundation for operation.

The main points are free and time-limited brood stock licences that are granted consecutively without special licensing rounds. This is how the Ministry wants to ensure equal and sufficient access to roe for industry players, while at the same time contributing to equal establishment conditions for the players. The licences will be time-limited, but to ensure the industry sufficient predictability, they will be given with a clear intention to extend them.

The Government will:

- arrange so new and existing players that wish to pursue goal-oriented breeding programmes and brood-production of salmon, trout and rainbow trout are able to do so in an efficient manner, by means of a new licensing scheme.

### ***Efficient management***

Regulations will ensure an efficient, good administration. Today The Aquaculture Act regulates the aquaculture industry; however licences and permits must also be obtained in accordance with the Pollution Control Act, the Food Act, the Harbour Act and, for brood stock facilities, the Water Resources Act. Applications for establishment must also be presented to the municipality and evaluated in terms of coastal zoning plans in accordance with the Planning and Building Act. It is therefore important for the industry that the authorities maintain good coordination and efficient procedures to handle applications for licences. One goal is to shorten the procedural time.

Since 2003, an alternate model for coordinating and to increase the efficiency of application procedures within the aquaculture industry, has been experimented with, the so-called Trøndelag model. The model consists of delegating authority from the county governor, the Norwegian Food Safety Authority and the Norwegian Coastal Administration to the Directorate of Fisheries, Region Trøndelag. The Government will continue the work set in motion in the Trøndelag model. The work will be seen in connection with regional reforms and revision of the Harbour Act.

A readily understood and simple body of regulations results in positive extended effects for the industry, the administration and society. It improves the industry players' predictability, eases the industry's burden when reporting to the authorities and others, and releases capacity in the administration. The work of simplifying and harmonising the rules and regulations is a continuous process that will remain highly prioritised in the administration.

The Government will:

- carry on the work with a view to establishing better coordination and more efficient procedures;
- arrange for procedures from 2010, when the new regions will take over parts of the management in accordance with the Aquaculture Act, to be taken care of in a better, more efficient manner, including evaluating whether the coordinated decision-making expertise in aquaculture matters shall also entail a transfer of authority in accordance with the Pollution Control Act.

### ***Access to areas and utilisation of areas***

Competition for coastal areas is increasing, and the aquaculture industry must compete for areas with others such as ship traffic, fishing, tourism and recreation. To achieve a versatile and efficient utilisation of the coastal zone, it is important that good processes are created to prioritise among the various interests. It is also important that the aquaculture industry's interests are promoted and taken care of through active and clear participation in planning processes.

The responsibility for the planning in the coastal zone belongs to the municipalities. If the municipalities are to reserve areas for the aquaculture industry, this must appear attractive to them. Environmentally-friendly and area-efficient production, together with work places and associated industrial activity, are conditions that affect a municipality's assessment of whether an area should be used for aquaculture purposes.

The aquaculture industry is now experiencing a shortage of access to good locations. This means that it is more important than ever to utilise areas allocated to aquaculture as efficiently as possible. There is a need for more knowledge and a total overview of the challenges. In addition there is a need for better cooperation between the industry and the authorities and across various sector authorities. In other words, there is a need for a better overview of the limitations and opportunities. The Institute of Marine

Research (IMR) is working with an evaluation of today's area usage in aquaculture. IMR's report will set the framework for further efforts.

The Government will:

- contribute to ensure the aquaculture industry good access to areas in the coastal zone, and that its use of area is most efficient.

The Ministry of Fisheries and Coastal Affairs will set up a committee that will examine the opportunities for a more efficient use of areas in the aquaculture industry. The committee will consist of representatives from the industry, concerned government sector authorities, the municipal sector and the relevant professional environments.

### ***Area fees (payment for use of areas in the coastal zone)***

The aquaculture industry is subject to competition. The industry is also cyclical, but surveys show that over time it has a regular rate of return. To ensure a continued profitable industry, it is important that the authorities, to the greatest extent possible, arrange for efficient use of the areas involved. Special fees and regulations that lead to higher costs for the industry will, seen in isolation, weaken the industry's competitive power.

Good locations are decisive for the most efficient usage of allocated licences. Salmon licences require several locations per licence. The industry is currently finding good locations to be a scarce factor. Several municipalities have indicated that they would rather use the areas for other objectives than aquaculture. The fact that access to areas is a real problem is confirmed by the industry, which has recommended voluntary area fees to the host municipality/community. Surveys have been made that show the municipalities would better support fish farming if they collected a fee. As of today, the municipalities' income from aquaculture is through company taxes to the State. An eighth of this is returned to the municipality.

An area fee would contribute to building more bonds with the local community because the industry to a greater extent would be directly contributing economically. Incentives to improve coastal zone planning can contribute to a more socially effective usage of the area.

The Government considers in principle that the municipalities should be able to collect an annual payment for use of areas in the coastal zone and will:

- implement a survey under the auspices of an inter-ministerial working group,
- take a final position to the questions linked to area fees in connection with the government budget for 2009.

### ***New licensing round for salmon and trout***

Within today's production limits (MAB) there is still room for increased production. Some fish farmers are probably closer to the production ceiling than others. This applies among other things to the production of rainbow trout, which have a larger

variation in biomass than salmon. Growth in production over the last years indicates that the production ceiling given in the national MAB can be reached as early as 2009/2010.

Growth in production in the salmon industry can occur through allocation of new licences, or by increasing the production within existing licences. An increase of production within the existing licences will provide better production terms and conditions for already established players, while granting new licences also makes way for new establishments.

A new licencing round for salmon licences will take place in 2009. Furthermore, the aim is to adapt annual licensing rounds to market growth, in order to create predictable framework conditions for the industry.

Today, licences are traded among industry players for payment. In the case of free licences, the value of the licence will fall to whoever trades the licence as second hand – and not to the community. It is reasonable that the value of the licence for the most part goes to the community and not to whoever is granted the special rights a licence entails. The aim is therefore that licences granted in 2009 will be granted against compensation paid to the State.

Small and medium-sized enterprises make up a large proportion of Norwegian businesses' value creation. Even if the aquaculture industry has gone through a significant development and the technology and the methods of operation and production volumes have changed, the industry still consists of players of different sizes and ownership structures. It is an advantage that the aquaculture industry has a differentiated structure, that includes both small and large players.

More specific criteria for granting licences and possible terms and conditions linked to licences will be clarified during 2008. The question regarding compensation will be examined together with area fees for the municipalities.

The Government will:

- pave the way for growth and new establishments, and carry out a new salmon licensing round in 2009,
- continue the scheme of compensation to the State for new salmon licences,
- make further efforts to prepare the next licensing round towards the presentation of the national budget for 2009, including:
  - o number and regional distribution;
  - o compensation and methods of granting licences;
  - o criteria for granting licences, among others to strengthen small and medium-sized players, ensure that activities are integrated economically in the region and provide opportunities for processing enterprises.

## ***Industry structure and owner limitations***

The Government lowered the ceiling for the ownership of licences in December 2005. This change led to a situation where permission now must be obtained from the Ministry if the acquisition of licences means that the acquirer obtains control of more than 15% of the total licence biomass. By control is meant direct or indirect ownership of more than half of the ownership interests. The upper ceiling for how much a licence holder can control is now 25% of the total licence biomass.

The regulation states that when evaluating whether a licence is to be granted, weight shall be given to whether the acquirer contributes to achieving national goals for the industry. This includes increasing the value of Norwegian fish exports, increasing value creation and releasing the industry's potential as a whole. Furthermore, consideration is taken of whether the acquirer contributes to sustaining the industry as a profitable and vigorous coastal industry.

The Government wishes to strengthen the opportunities for small and medium-sized enterprises. This will be taken care of through the formulation of criteria and/or terms and conditions for new licensing rounds.



## 5. Research & Development

The Soria Moria Declaration states that conscious focus shall be placed on industries where Norway has advantages and great value creation potential. Marine research is one of five prioritised areas.

During the Storting's discussion of Report no. 20 to the Storting (2004-2005), concerning research intentions<sup>5</sup>, they set a goal in making Norway a leading research nation. Marine research is prioritised in the report. In reference to this, the Research Council of Norway (RCN) selected aquaculture as one of seven large areas of priority. The aquaculture programme administrates NOK 100 million annually.

In 2005, about NOK 800 million were used on aquaculture research in Norway. In recent years, aquaculture research has had a larger growth in real terms than all the R&D combined.

Businesses and the RCN were the largest contributors, responsible for about a third each. Businesses' share of the total funds was 35% in 2005, and businesses were the largest individual source of funds. The Fishery and Aquaculture Industry Research Fund and the EU's framework programme for research are both important sources of funds for marine research. In 2005, aquaculture research received NOK 30 million from the EU's framework programme for research.

Businesses take responsibility for a relatively larger share of the research on salmon than on marine species. The universities, university colleges and colleges devote a larger share of their research to marine species. This reflects the fact that the salmon industry has a greater need for applied research, while for new species in fish farming the need is for more basic research.

About NOK 1.1 billion were allocated in 2007 for marine research in the Ministry of Fisheries and Coastal Affairs' budget. NRC and the institutes manage the funds. In addition to project funds, the Ministry of Fisheries and Coastal Affairs funds significant infrastructure investments in aquaculture research.

### ***Important future research areas***

New marine species are a main area of focus. This entails both new opportunities for business development and new challenges. The experiences from salmon farming have shown that research is decisive for a profitable and sustainable development. To succeed with investments in new marine species – cod in particular, but also other species – there must be a targeted focus on both basic and applied research. Prioritised areas for salmon and other new marine species will be in breeding, feeding, fish health and fish welfare. The relation between farming, and fjord and coastal ecology receives

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<sup>5</sup> *Stortingsmelding nr. 20 (2004-2005) Vilje til forskning*

increased attention and significance. With this follows the need for increased knowledge and research efforts.

An international evaluation of Norwegian biological research concluded that Norwegian aquaculture research is not sufficiently anchored in basic research of high quality. This is a hindrance to real innovation and development in the industry. Because of this, it is important that research areas such as biology, technology, fish health and nutrition focus on basic research.

There are significant challenges in strengthening basic research while at the same time maintaining focus and efforts on problem-solving and user-directed research. Coordination with the industry will be important in creating good solutions.

Active and goal-oriented focus on international research cooperation contributes to increased quality and reduced costs of research. Norway has participated in the EU's Sixth Framework Programme for Research and Technological Development. There is Norwegian participation in every tenth project, and in marine projects, the share of Norwegian participation is even greater. The EU has now begun its Seventh Framework Programme for Research and Technology. Norway has received support for its view that marine research remains one of the most important focus areas in European research as well.

The Government will:

- continue to prioritise aquaculture research on salmon, cod and other marine species,
- continue to prioritise research cooperation with the EU and stimulate efforts in the marine area,
- arrange for international research cooperation through the establishment of goal-oriented cooperative agreements and cooperative fora with relevant countries.

### ***Measures to strengthen research in the industry***

The Ministry of Fisheries and Coastal Affairs promotes research in the industry primarily through funding of research programmes and investments in research infrastructure.

The Skattefunn scheme<sup>6</sup> is another important instrument that strengthens research and development in the aquaculture industry. The industry makes use of the scheme to a large extent. In 2006, every eighth approved Skattefunn project was a marine project.

The Fishery and Aquaculture Industry Research Fund was established in 2001. The fund is financed by the industry through a fee. In 2007, the fund managed NOK 116 million.

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<sup>6</sup> *Skattefunn* is a tax relief scheme for research and development projects that satisfy statutory requirements.

To strengthen the industry-directed marine research, there have been made efforts to merge Fiskeriforskning, Akvaforsk, Matforsk and Norconserv into a single research institute: NOFIMA AS. The establishment of NOFIMA is planned for 1 January 2008. NOFIMA will also comprise of other research communities that together will take responsibility for the breadth in research many users demand. There will be larger professional groups behind each project because the institutes involved have many overlapping areas. This will result in a more efficient use of resources, less vulnerability for the institutes and strengthened international competitive power.

The Government will:

- continue to prioritise aquaculture research and other marine research,
- establish NOFIMA as an effective and efficient research institute for the aquaculture industry.

### ***Innovation and the Marine Value Adding Programme***

The aquaculture industry's competitive power is dependent on among other things the ability to innovate. Consumers that are more conscious and an increased trade in food products induce demands with respect to the traceability, production and documentation of safe and healthy food in the Norwegian aquaculture industry.

Therefore, research and production must be linked with the demands and opportunities in the market.

The Marine Value Adding Programme is in its second effective year. Allocations have increased from NOK 40 million in 2006 to NOK 75 million in 2007. The programme's main goal is to strengthen the seafood industry's value chains towards the market. The central instrument of the programme is to finance networks between small and medium-sized enterprises. Together, these can make up more effective units in the competitive, international seafood markets. Another goal of the programme is to strengthen the position of the marine industry in areas with special needs for adaptation that are located along the coast. Innovation Norway administrates the programme.

Under the auspices of the Value Adding Programme, the Norwegian School of Economics and Business Administration in Bergen has initiated a competency study. Knowledge of the different international seafood markets, strategic adaptations of companies and the development of cooperative relationships are developed here.

The Government will:

- continue its commitments to the Marine Value Adding Programme.

## **6. Summary – Measures**

The Government will:

### **Section (Chapter) 2 Market challenges**

- **Prioritise efforts in the WTO.**
- **Focus strongly on the efforts to enter into free trade agreements with important markets.**
- **Work to ensure that the Russian authorities acknowledge supervision by the Norwegian Food Safety Authority.**
- **Contribute to sustaining consumer awareness of the high quality maintained by Norwegian seafood production.**
- **Ensure that the Norwegian Seafood Export Council AS shall be a useful body for the joint marketing of Norwegian seafood.**

### **Section 3 Sustainable growth and safe seafood**

- **Ensure that the Norwegian aquaculture industry is operated in a sustainable manner.**
- **Follow up “Vision No Escapees” with the aim of securing that escapes do not take place.**
- **Follow up “Vision No Escapees” with the aim of escapes not taking place.**
- **Enter into dialogue with the industry’s organisations based on their proposal for an industry-financed fund to ensure cleaning up after aquaculture localities are closed down.**
- **Undertake a complete review and revision of the fish health rules and regulations, and develop action plans for the most serious diseases.**
- **Enter into dialogue with industry organisations regarding the establishment of a community solution by establishing an industry-financed fund for partial coverage of the fish farmer’s risk linked to insurance.**
- **Ensure that Norwegian farmed fish is produced in an ethically responsible manner.**
- **Prioritise the development of relevant welfare indicators for farmed fish.**
- **Arrange for increased consumption of seafood among the population, especially among children and young people.**
- **Contribute to the establishment of a national electronic infrastructure for efficient exchange of information and traceability in the food chain by 2010.**

### **Section 4 A future oriented aquaculture policy**

- **Continue today’s licensing system for salmon, trout and rainbow trout – without new licence classes.**
- **Arrange so new and existing players that wish to pursue goal-oriented breeding programmes and brood-production of salmon, trout and rainbow trout are able to do so in an efficient manner, by means of a new licensing scheme.**

- Carry on the work with a view to establishing better coordination and more efficient procedures.
- Arrange for procedures from 2010, when the new regions will take over the part of the management in accordance with the Aquaculture Act, to be taken care of in a better, more efficient manner, including evaluating whether the coordinated decision-making expertise in aquaculture matters shall also entail a transfer of authority in accordance with the Pollution Control Act.
- Contribute to ensure the aquaculture industry good access to areas in the coastal zone, and that its use of area is most efficient
- The Government considers it a basic principle that the municipalities should be able to collect an annual payment for use of areas in the coastal zone and will:
  - implement a survey under the auspices of an inter-ministerial working group,
  - take a final position to the question linked to area fees in connection with the government budget for 2009.
- Pave the way for growth and new establishments, and carry out a new salmon licensing round in 2009.
- Continue the scheme of compensation to the State for new salmon licences
- Make further efforts to prepare the next licensing round towards the presentation of the national budget for 2009, including:
  - number and regional distribution,
  - compensation and methods of granting licences,
  - criteria for granting licences, among others to strengthen small and medium- sized players, ensure that activities are integrated economically in the region and provide opportunities for processing enterprises.

#### Section 5 Research & Development

- Continue to prioritise aquaculture research on salmon, cod and other marine species.
- Continue to prioritise research cooperation with the EU and stimulate efforts in the marine area.
- Arrange for international research cooperation through the establishment of goal-oriented cooperative agreements and cooperative fora with relevant countries.
- Continue to prioritise aquaculture research and other marine research.
- Establish NOFIMA as an effective and efficient research institute for the aquaculture industry.
- Continue its commitments to the Marine Value Adding Programme.



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