

EUROPEAN PARLIAMENT

2004



2009

Session document

FINAL
A6-0155/2005

25.5.2005

REPORT

on industrial fisheries and the production of fishmeal and fish oil
(2004/2262(INI))

Committee on Fisheries

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PR_INI

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on industrial fisheries and the production of fishmeal and fish oil (2004/2262(INI))

The European Parliament,

- having regard to the ban on feeding fishmeal to ruminants imposed by the European Commission in 2001, a precautionary measure introduced by Council Decision 2000/766/EC of 4 December 2000 concerning certain protection measures with regard to transmissible spongiform encephalopathies and the feeding of animal protein ¹ and later consolidated in Permanent TSE Commission Regulation (EC) No 1234/2003 of 10 July 2003 ² amending Annexes I, IV and XI to Regulation (EC) No 999/2001, laying down conditions under which the Member States could authorise the feeding of fishmeal to non-ruminant animals (Annex IV),
- having regard to the 2004 working paper of the European Parliament's Directorate General for Research entitled 'The Fish Meal and Fish Oil Industry - Its Role in the Common Fisheries Policy',
- having regard to the proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 999/2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (COM(2004)0775) and draft Commission Regulation (SANCO/3027/2004), submitted by the Commission following the development of a validated method (Commission Directive 2003/126/EC of 23 December 2003 on the analytical method for the determination of constituents of animal origin for the official control of feedingstuffs ³) that enables the detection of mammalian meat and bone meal in animal feeds even in the presence of fishmeal in the same feed, and recognising that the basis to prohibit the feeding of fishmeal to ruminants is therefore no longer valid and this prohibition should be lifted,
- having regard to its resolution of 28 October 2004 on the draft Commission regulation amending Annex IV to Regulation (EC) No 999/2001 of the European Parliament and of the Council as regards transmissible spongiform encephalopathies (TSEs) and animal nutrition ⁴, calling for a withdrawal of the draft regulation, and considering that the feeding of fishmeal to ruminants is not consistent with the duty imposed on the Community to protect the health of its citizens,
- having regard to the maximum allowable levels of undesirable substances in animal feeds set out in Directive 2002/32/EC of the European Parliament and of the Council of 7 May 2002 ⁵, amended in 2003 to include dioxins by Commission Directive 2003/57/EC of 17 June 2003 ⁶ and further amended in Commission Directive 2003/100/EC of 31 October

¹ OJ L 306, 7.12.2000, p. 32.

² OJ L 173, 11.7.2003, p. 6.

³ OJ L 339, 24.12.2003, p. 78.

⁴ P6_TA(2004)0043

⁵ OJ L 140, 30.5.2002, p. 10.

⁶ OJ L 151, 19.6.2003, p. 38.

2003¹,

- having regard to the Communication from the Commission to the Council and the European Parliament on improving the monitoring of industrial fishing within the EU (COM(2004)0167) which aims at establishing transparent and effective monitoring of industrial landings throughout the Community,
- having regard to Rule 45 of its Rules of Procedure,
- having regard to the report of the Committee on Fisheries (A6-0155/2005),

A. Whereas it is necessary for the stability of the fishmeal and fish oil industry to deal in a coherent way with questions of ethics, sustainability, toxins, heavy metals and pollutants which are sometimes raised,

B. Whereas there is no scientific evidence that the use of fish products in animal feed might transmit BSE or TSEs; whereas strict regulatory controls, together with extensive investment by the industry, have ensured the safety of the food chain from contamination by dioxins and dioxin-like PCBs,

C. Whereas because of improved official methods there is no risk of confusing the presence of mammalian meat and bone meal with fishmeal,

D. Whereas fishmeal is rich in essential amino acids in the form of protein, and fish oil and fishmeal are rich in fatty acids which provide health and welfare benefits both to humans and animals,

E. Whereas, whilst there are diverse opinions as to the effects of industrial fishing and too much reliance should not be placed upon single sources of information, the 2004 results of the ICES study suggested that the impact of industrial fisheries on the marine eco-systems is relatively small in comparison with the effects of fishing for human consumption,

¹ OJ L 285, 1.11.2003, p. 33.

- F. Whereas, nevertheless, research should continue into the impact of industrial fishing on marine eco-systems and the wider environment,
- G. Whereas all the countries and regions supplying the EU with fishmeal support and implement the FAO Guidelines of Responsible Fisheries,
- H. Whereas the 2004 DG Research Working Paper stated that in EU waters most of the targeted species, for which data is available, are considered to be within safe biological limits,
- I. Whereas the fishmeal and fish oil industry is of global importance, employing an estimated 2,222 people directly and 30,000 indirectly in Europe and more than 100,000 people in Peru, the largest fishmeal producer and exporter,
- J. Whereas fishmeal and fish oil are of crucial importance as a basic feed stock for farmed fish in the EU's burgeoning aquaculture sector,
1. Recognises that the Commission currently applies the principle of setting TACs and quotas according to certain scientific criteria and considers the use of fish once landed to be an economic issue and not a conservation issue;
 2. Welcomes the Commission Communication on improving the monitoring of industrial fishing within the EU;
 3. Stresses the importance of continuing research into the impact of industrial fisheries and its effect on other fisheries as well as on the wider marine environment, with a view to keeping all fishing activities at a sustainable level and rewarding those fishermen using the most environmentally friendly techniques;
 4. Asks the Commission to increase scientific research on blue whiting in order to obtain improved advice and management in the near future and urges EU Ministers of Fisheries to work with the Faero Islands, Norway and Iceland towards agreeing a blue whiting TAC, including the proportion to be caught by each party to the agreement;

5. Stresses the problem of discards from marine fisheries, a problem which is estimated in Europe to account for up to 1 million tonnes annually;

6. Calls on the Commission to carry out studies and/or pilot projects to investigate the current situation of discards and the possibilities for their use by the industrial fishing sector so that, under no circumstances, it could lead to an over-exploitation of resources;

7. Suggests that use of discards by the fishmeal and fish oil industry should be examined by the Commission in close relation with Parliament's Committee on Fisheries given the swiftly expanding EU aquaculture sector;

8. Stresses the controls in place in the EU to limit the presence of undesirable substances and contaminants in animal feeds, ensuring that fishmeal and fish oil remain well within the limits, and welcomes the €25 million investment by the fishmeal and fish oil industry in Denmark and the UK, aimed at eliminating dioxins and dioxin-like PCBs and ensuring the creation of a safe and healthy product; calls on the Commission and Member States to monitor closely the application of the existing controls;

9. Notes with approval that this investment by the industry has been willingly undertaken despite the absence of adoption of the EU "the polluter pays" principle;

10. Stresses the need for the industry to apply the ALARA (As low as reasonably achievable) principle at all times when dealing with dioxins and dioxin-like PCBs;

11. Calls for scientific analysis to determine acceptable limit values for dioxin in fishmeal for feeding pigs and poultry;

12. Stresses that there is no scientific evidence to support banning fishmeal on the grounds that it may transmit BSE or other TSEs; stresses also that there are no ethical reasons for prohibiting the use of fishmeal in EU ruminants' diets and notes that a ban on feeding of fishmeal to ruminants is likely to exacerbate welfare concerns;

13. Calls on the Commission and the Council to lift the ban on feeding fishmeal and fish oil to ruminants;

14. Instructs its President to forward this resolution to the Council and Commission.

EXPLANATORY STATEMENT

1. INTRODUCTION

The international fishmeal and fish oil industry is a globally significant employer. The industry is of vital importance to fish farming, agriculture, animal welfare, human nutrition and the fisheries sector in general. An International Hearing took place in the European Parliament on 15 March 2005 entitled "The International Fishmeal and Fish oil Industry, Challenges and Opportunities". On the basis of the information and conclusions which were discussed and drawn at this Hearing, this report will look in detail at the challenges and opportunities affecting the industrial fishery.

Your *rapporteur* will look at the importance of industrial fisheries at global and EU level, referring to the size and scale of this industry within the EU, the importance of the industry to aquaculture, farming, processing and the wider fisheries sectors, the scale of production and imports into the EU and the challenges and opportunities facing the industry in respect to questions over *ethics, human health, sustainability and aquaculture*.

- *Industrial Fisheries: an overview*

In 2004 the European Parliament's Fisheries Committee commissioned a study regarding the role of industrial fisheries in the CFP. The study entitled '*The Fishmeal and Fish Oil Industry - Its Role In The Common Fisheries Policy*' provides a very interesting background to the scale of the industry within the EU (2004 European Parliament – DG Research Working Paper).

Industrial fisheries in the EU is conducted by both EU registered vessels (landing 1,524,000 tonnes annually) and non-EU vessels which land into EU ports (277,000 tonnes annually). Trimmings from the fish processing industry produce 912,500 tonnes annually.

The EU is a net importer of fishmeal (686,000 tonnes) and fish oils (63,000 tonnes). The UK is the largest consumer of fishmeal in the EU largely due to its extensive aquaculture sector. Germany, France, Spain, Denmark and the Netherlands use fishmeal for their agriculture and aquaculture sectors. Greece, Italy and the smaller Mediterranean islands rely on fishmeal for their sea bass and sea bream aquaculture. The European market corresponds to a consumption of 1.1 million tonnes per year. In 2002 and 2003 the fishmeal imports and consumption in Europe is known to have fallen markedly and is down 18% against preceding years. In the UK alone the market is down to 190,000 tonnes from 290,000 tonnes in 2000, in spite of the growth in aquaculture. This is a result of the ban on the use of fishmeal in ruminant feeds.

Economically the EU feed fish sector is relatively small compared to other EU fisheries. In economic value the production of feed fish accounts for only 0.5% sector employment. Employment from the fishmeal and fish oil sector is 2222 in total. However if we take into account the reliance of the aquaculture sector on industrial fishing and the linkage with the agriculture sector, then it can be said that 29,800 workers can be linked directly to the EU feed fish and trimmings sectors.

As far as industrial fishing at global level is concerned, fishmeal production represents an average of 6.4 million tonnes for catch of the last 10 year period. Regarding fish oil, the production has been around 0.9 million to 1.5 million tonnes, which only represents 1% when compared with total production of fat materials. The world's biggest fishmeal producers and exporters outside the EU are Peru (52% of world exports), Chile (13%) and Iceland/Norway (7%) on a total of 3.7 million tonnes in 2002.

One of the other biggest markets for fishmeal is China, where it is used in feed for aquaculture and protein concentrates for pigs and poultry. In the year 2000, 28% of fishmeal world production went to China, with 29% into other Far East countries, EU-15 32% and the remainder to the Americas, Middle East and Eastern Europe.

2. ETHICS OF ANIMAL FEEDING

- *Background*

Since the mid 1990s there has been a succession of food and animal disease scares in the EU including mad cow disease (BSE), Avian Flu, Foot and Mouth Disease, Swine fever, Salmonella, Viral Pneumonia, Infectious Salmon Anaemia etc. All incidences have increased the concern of the public to the conditions in which farm animals are housed and fed.

During the past decade animal welfare groups have focused on the husbandry of the farmed animal, which has led governments to consider these matters carefully. In 1999, European governments agreed in the Treaty of Amsterdam to a stipulation that animals be regarded as "sentient beings", rather than as units of production.

In October 2004 the European Parliament expressed its concern on one particular aspect of animal husbandry when in Resolution P6_TA(2004)0043 it called on the Commission to withdraw its Draft Regulation amending Annex IV of Regulation 999/2001 (SANCO/3027/2004) to re-continue the use of fishmeal in ruminant (cattle, sheep and goats) feeds after a temporary stop since 2001 because of the emergency measures adopted at that time to prevent the spread of BSE. The Parliament rejected the Commission proposal not primarily on food safety grounds, but because the ruminant is a herbivore and does not naturally eat fish derivatives.

- *Is it natural to feed fishmeal to ruminants?*

Professor J. Webster of the UK University of Bristol School of Veterinary Science stated at the Hearing that a diet based entirely on grazed pasture cannot support the level of production that has been artificially bred into (e.g.) the modern dairy cow. It will supply less than half of the nutrient requirements. In an ethical sense, the 'unnatural act' has been to breed such an 'abnormally' productive animal. However, society at large has deemed this to be an acceptable procedure. This abrogates to the producer the responsibility to provide these animals with a diet consistent with their physiological needs as determined by their genotype. These cannot be met from grass alone.

Prof Webster stated that the value of any potential feed source (e.g. fishmeal) cannot be considered in isolation but only as a constituent of the overall diet. The definition of a good diet, on both scientific and ethical grounds, is one that can "satisfy an animal's nutritional needs and promote a positive state of well-being". More specifically, a good diet (and the

ingredients that make up a good diet) should meet the following criteria:

1. *Provide an adequate and balanced supply of energy and other nutrients.*
2. *Promote good digestion and the sustained health of the digestive tract.*
3. *Promote oral and behavioural satisfaction*
4. *Do no harm.*

In a strictly nutritional context, fishmeal is a potentially valuable contributor to the ruminant diet when fed in small quantities to supplement the nutrients made available from the ruminant digestion of grasses, cereals and other wholesome vegetable sources. Thus it fulfils the first requirement for a good dietary ingredient – it can make a significant contribution to the provision of a balanced diet for a highly productive animal; e.g. a high yielding dairy cow or a ewe carrying two or more lambs. Because the level of incorporation of fishmeal into ruminant diets is small, it is unlikely to have a significant effect on criteria of healthy digestion or oral satisfaction, provided the animals are also provided with an adequate source of dietary fibre from grass or forage. There is absolutely no evidence to link the feeding of fishmeal to prion diseases (TSEs) in any farm animal. Thus, on strictly scientific grounds, fishmeal meets all the necessary criteria to be classified as a good dietary ingredient for all farm animals, including ruminants.

It is however valid on ethical and political grounds to ask whether or not society should permit the feeding of safe but ‘unnatural’ animal products to farm animals in general and ruminants in particular. In this regard it is necessary to point out that when a growing calf or lamb is reared naturally at pasture with its mother, it begins life on a diet that is entirely of animal origin, i.e. milk. As its rumen develops, it progressively acquires the ability to derive nutrients from grass. However for at least the first half of growth (e.g. until a calf is about 9 months of age) it cannot sustain normal healthy growth from grass alone. In the natural state the growing calf at pasture with its mother obtains a high proportion of its protein, essential fatty acids, minerals and vitamins from milk. This bypasses the rumen and is directed through the oesophageal groove directly into the abomasum where it is digested in the same way as milk or other foods of animal origin would be digested by a pig or human.

The most unnatural act associated with commercial farming practice has been to remove the calf from its mother at a very early age thus depriving it of high quality food of animal origin. Feed compounders sought to make up for this nutritional insult by formulating diets with a nutritional value close to that of cows’ milk. The feeding of meat and bone meal of mammalian origin in milk replacer diets for young calves was undoubtedly a major contributor to the BSE epidemic in the U.K. However fishmeal has been pronounced safe. Once again fishmeal has been used to remedy an ‘unnatural’ but acceptable feature of standard farm practice.

Today almost every aspect of the husbandry of domestic animals differs from their condition in the wild. The use of synthetic amino acids in pig and poultry nutrition and, more recently, in ruminant nutrition appears at least “unnatural”. Equally “unnatural” is the current practice of feeding soybeans to farmed salmon, a practise being increasingly encouraged by the European Union through its research programmes.

There are a number of examples of cows eating animal material in the wild:

- Cows eat their own afterbirth; cows eat bones when they are deficient in phosphorus (Pica)– all cases are examples of ruminants turning to animal protein at a time of nutritional stress.
- Cows and sheep with access to beaches eat washed up fish, with examples from the Roman empire, the New world (USA), and Iceland

Feeding fishmeal or dried fish as a protein supplement is not a recent practice developed by modern intensive farming methods. The practice of feeding fishmeal goes back 2000 years. Belief in the health and condition benefits of feeding small quantities of fishmeal has been passed down through generations of traditional stockmen. Nutrition scientists have been demonstrating benefits and digestibility for 150 years. Farmed ruminants consume fishmeal willingly and it is very easily digested.

- *The role of fishmeal in modern ruminant production*

Fishmeal protects animals from natural stresses and the debilitating effects of bearing young. For example fishmeal is fed to hill ewes (mother sheep) in the crucial pre- and post-lambing periods, substantially reducing ewe and lamb deaths especially in adverse weather. Emeritus Professor of Animal Reproduction at SAC Aberdeen, John Robinson, has estimated that hill lamb mortality would double from 15% to 30% in a typical spring lambing period in the absence of fishmeal. The welfare benefits to sheep are endorsed by the leading UK animal welfare organization, The Royal Society for the Prevention of Cruelty to Animals.

Because fishmeal protein is efficiently used by farm animals, nitrogen and phosphorus excretion in the faeces is minimised. This reduces the environmental impact of the slurry. Ammonia production is also reduced.

Crucially fishmeal is rich in both essential amino acids in the form of protein, and in the long chain polyunsaturated omega-3 fatty acids DHA and EPA (PUFAs) which provide health and welfare benefits to animals. Meat, milk and eggs from farm animals fed on fishmeal and oil are, in turn, foods that benefit human health.

- *Are there animal risks with fishmeal?*

There is no evidence to support banning fishmeal on the grounds that it might transmit BSE or other TSEs. This is the view of the Commission and its food safety advisers. This view appears to be supported by all other health authorities and experts, including the Committee on Fisheries of the Food and Agriculture Organisation (UN) which has stated that “There is no epidemiological evidence for BSE being transmitted to ruminants or other animals by fishmeal. Similarly there is not epidemiological evidence for transmission to humans of a variant CJD caused by prions that used fish or fish products as vectors” (FAO Fisheries Report No 673 page 12).

In spite of the fact that fishmeal poses no known animal or human disease risk, as argued above, like all feedstuffs unexpected microbiological or chemical contamination above the safe level set by the EU can occur. It is therefore essential that all feedstuffs, including fishmeal, are traceable to origin, and in the case of fishmeal to the coordinates of the sea where the industrial fish is caught. Independently certified schemes are now in place to give this assurance. These schemes are mandatory in the EU since January 2005.

Professor Webster concluded his presentation to the Hearing by asking: “Could it be unacceptable to incorporate foods of animal origin in rations for ruminants simply on the basis that they are perceived by society (though not the animals themselves) to be unnatural?”

Prof. Webster concluded that it is ethically inadequate to consider this question in isolation. The justification for fishmeal has arisen within the context of a whole series of unnatural acts of husbandry, including the selection of dairy cows and ewes for 'abnormally' high productivity and the practice of denying young calves a natural source of protein in mother's milk. Fishmeal can make a significant contribution to the solution of these problems. A ban on the feeding of fishmeal to ruminants is likely to exacerbate them.

3. AQUACULTURE

World aquaculture is growing rapidly. It increased production 15 fold in the period 1970 to 2002, from 3.6 million tonnes to 51 million tonnes. With the current world annual growth rate of 6 percent, aquaculture should exceed capture fisheries in the production of edible fish, crustaceans and molluscs by 2015 since global capture fishery output remains stable.

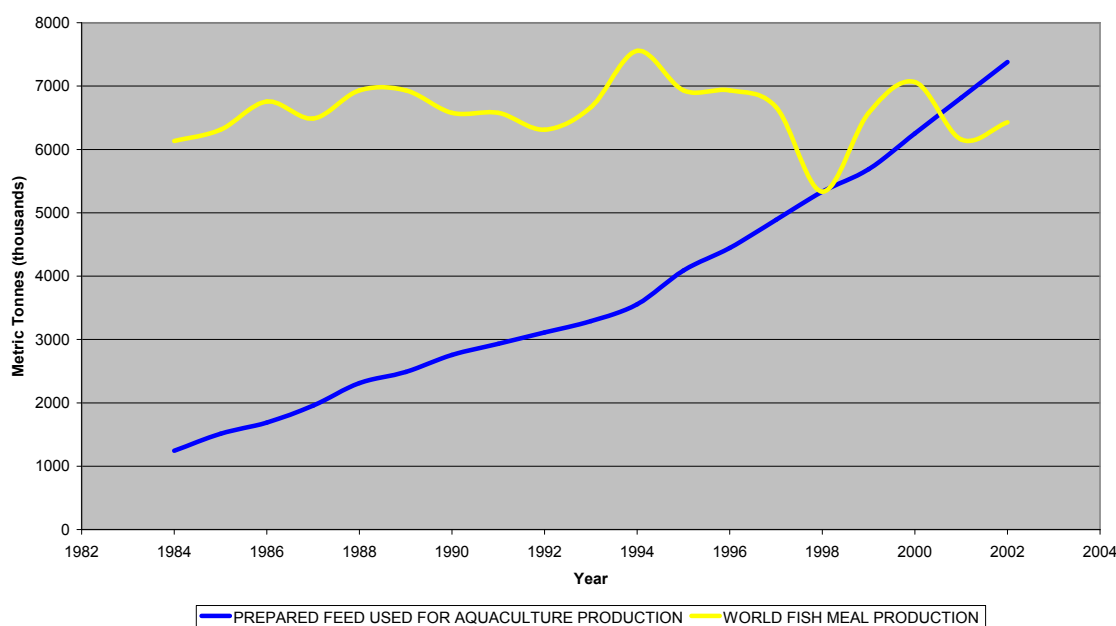
In the EU the expansion of aquaculture has been less dramatic. In 2001 the outputs from aquaculture was 600,000 tonnes of finfish and eel. Projected future growth in the EU is predicted to reach 1 million tonnes in 2010, but recent figures suggest that growth could be slowing.

- *Demand of fishmeal and oil*

In 2002 it has been estimated that world aquaculture consumed 2.9 million tonnes of fishmeal (45% of annual production) and 790 thousand tonnes of fish oil (83% of annual production). Clearly fish oil is a limited resource for future aquaculture production. This is clearly driving the research to find fish oils substitutes, but there is no substitute with equivalent levels of Omega 3 important fats such as EPA and DHA.

The amount of fishmeal and fish oil produced globally is not determined by demand. It is controlled by governments to ensure fishing remains sustainable. This is seen clearly in figure 1 comparing growth of aquaculture feed against almost static production of fishmeal (and fish oil-not shown).

Fig 1: PRODUCTION OF AQUAFEED AND FISHMEAL 1984-2002 (excludes Carp)



- *Eco-efficiency of converting wild feed-grade fish to farmed fish -Wasting food resources?*

The wild fish caught to produce fishmeal are mainly small, bony pelagic fish for which there is little or no demand for human consumption (see Chapter 5). As there is no direct commercial market for these pelagic fish for human consumption, then fishmeal conversion efficiency should be compared with the only real alternative route into human consumption, namely that pelagic fish are eaten by wild predator fish which are themselves suitable for human consumption.

Studies of the efficiency of conversion for wild caught pelagic fish to human food have shown that: via pelagic fish being eaten by wild cod the conversion into edible cod fillets is 7% (100 tonnes of capelin is needed to produce 7 tonnes of cod fillet) via the fishmeal and land animal feed route it is 21%. Feeding fishmeal to farmed fish improves conversion efficiency significantly above that of the land animal route. The European Parliament- DG Research Working Paper stated that the efficiency of humans consuming these wild fish directly compared with consuming farmed fish fed in part on fishmeal was about equal.

4. HUMAN HEALTH

Fishmeal is not eaten directly by people with the exception of very small volume sales of fishmeal tablets in Norway sold through pharmacies for dietary supplements of sportspersons. About 33% of the fishmeal consumed in the EU is fed to farmed fish; the balance is fed to pigs and poultry. Thus the effect of fishmeal on human health is as a result of the meat eaten from farmed fish, pigs, and poultry fed on the product as a feed ingredient.

Some fish oil is consumed directly in the form of health food supplements in the EU.

Currently it is estimated that the quantity consumed in the EU is about 7,000 tonnes per annum. The largest quantity of fish oil consumed in the EU is used in feed for farmed fish (161,000 tonnes) at about 60% of total annual consumption.

Thus whether the consumer is taking fish oil capsules or eating fish, including farmed fish, the question is what are the benefits and risks of this consumption in terms of human health?

- *The health considerations*

In 2004 the UK Food Standards Agency (FSA) reported on the benefits and risks of fish consumption, with particular reference to oily fish.

The Agency concluded that although oily fish contained persistent organic pollutants, principally dioxin and dioxin-like PCBs, data indicated that the most sensitive individuals (women of reproductive age and girls) could consume two portions of oily fish per week in safety. Other individuals could consume higher levels – up to four portions of oily fish.

The benefits of consuming EPA and DHA (omega 3 fats) from oily fish with specific reference to cardiovascular disease (CVD) and pregnancy outcome were confirmed.

Other reported benefits of fish consumption, such as preventing the development of some cancers, other aspects of brain function (e.g. cognitive decline; bipolar disorder), anti-inflammatory conditions (e.g. arthritis, asthma) and autoimmune diseases, were not considered by the Agency.

- *Undesirable substances in Animal feed*

Diane Benford of the UK Food Standards Agency at the Hearing pointed out that legislation concerning maximum levels of undesirable substances in animal feed is harmonised throughout the EU including fishmeal, fish oil and fish feed. The aim of these maximum permitted levels is to safeguard the health of consumers of products of animal origin and animal health. Moreover, in response to concerns of the public and the European Institutions, the fishmeal and oil industry made a world wide survey of the levels of dioxins and dioxin-like PCBs in its products. Most were below levels of concern. Sources from some European fisheries, particularly when caught with low body fat levels, were close to the limits being considered by EU Member States. Some members of various European Institutions have suggested that such fisheries should be closed completely or subject to seasonal closures when dioxin and dioxin-like PCBs are likely to approach or exceed the limits. In response to this the fishmeal and oil industries in Denmark and the UK installed facilities for removing some of the dioxin from fish oil and fishmeal at a cost of €25 million installation costs and additional processing costs. This was done in spite of the fact that the fishmeal industry was not the cause of the pollution, but a victim. Likewise the industry involved in preparing fish oil food supplements for the market has borne considerable costs to remove or reduce the level of contaminants. The European principle that the "polluter pays" as set out in Article 174.2 of the EC Treaty (and which is the basis for Directive 2004/35/EC on environmental liability), has not been adopted in these cases.

5. SUSTAINABILITY OF INDUSTRIAL FISHERIES

Fishmeal used in the EU is made from fish trimmings and a variety of species depending on the source of production. Estimates of the principal species of industrial fish consumed as fishmeal in the EU, based on the composition of the raw material manufactured into fishmeal in each producing country and the volumes of these materials consumed in EU-15, indicate that the main raw materials are anchovy (33%), followed by trimmings (14%), blue whiting (13%), capelin and sand eel (11% each), sprat (7%) and jack mackerel, herring and others (4% each).

- *Industrial fisheries*

All the Countries or Regions supplying the EU-(Table 1) support and implement the FAO Guidelines for Responsible Fisheries. All the species listed above are managed by national Governments and/or regional organizations and have national/regional TACs, which are decided on an annual basis or more frequently as is deemed necessary. The one exception is Blue Whiting.

Governments impose many management control measures, which are listed in table 2. One of the latest technologies to be applied is that of satellite monitoring, which ensures that closed seasons or closed areas are respected.

Table 2: Fisheries Management Control Measures Used in Different Regions

	T A C s	Area Catch Limits	Closed Areas	Seasonal bans	By-catch limits	Type of gear*	Effect on seabed	Minimum mesh size	Minimum fish landing size	Vessel registration	Satellite tracking	ITQ system
SOUTH AMERICA												
Anchovy	√	√	√	√		P	None	√	√	√	√	
Jack Mackerel	√	√	√	√		P	None	√	√	√	√	
Sardine	√	√	√	√		P	None	√	√	√	√	
N.E. ATLANTIC and NORTH SEA												
Sandeel	√	√	√	√		T	Slight	√		√	√	
Sprat	√	√	√	√		P	None	√		√	√	
Norway Pout	√	√	√			P	None	√		√	√	
Blue whiting						MT	None	√		√	√	
Capelin	√	√	√	√		P, MT	None	√	√	√	√	√
Herring	√	√	√	√	√	P, MT	None	√	√	√	√	√

*P=purse seine; T=light weight trawl; MT=mid-water trawl

The 2004 DG Research Working Paper for the European Parliament stated that «In EU waters most of the targeted feed fish stocks, for which data are available, are considered to be within safe biological limits ». Some stocks are un-assessed because they are not fished heavily. Since the majority of stocks assessed are considered safe, management measures centred on a TAC scheme (set under the precautionary approach) seem a robust approach.

Blue whiting has received considerable attention over the last few years. According to ICES (2004) blue whiting is classified as having full reproductive capacity but harvested unsustainably. Recruitments in the last decade appear to be at a much higher level than earlier. In principle agreement has been reached for a long-term management plan consistent with a precautionary approach including sharing out the quota among the main fishing nations. In practice Member States continue not to agree on individual state quotas. Your *rapporteur* urges Ministers of Fisheries in Norway, Iceland, and EU to agree a global TAC and the

proportion to be caught by each party to the agreement.

- *By-catch*

The European Parliament- DG Research Working Paper notes that by-catch is a problem in many human-consumption fishing activities world-wide. For example, landings of roundfish in the North Sea in 1990 were estimated to have a by-catch of 25% which was discarded. With regard to industrial fisheries most attention has been given to this matter in North European waters. Juvenile herring are known to shoal with sprat. Juveniles of various food-fish species are known to shoal with Norway Pout.

The 2004 European Parliament- DG Research Working Paper details the average landings and percentage by-catch from North Sea by different Danish industrial fisheries during the periods 1998-01 and 2002. The most controversial fisheries are summarised in table 3.

Table 3: Average Percentage By-catch landed with Target Species

	Sprat	Norway Pout
	1998-01	1998-01
Target species %	88	87
Herring %	6	3
Other food-fish %	2	5
Other Industrial fish %	4	5

This issue has been addressed by closure of part of the North Sea to Norway Pout fishing. Similarly seasonal closures and by-catch limits exist for conservation of the juveniles of herring and sprat. The Commission has outlined plans for further improvements in monitoring industrial fishing (COM(2004)167 of 25/3/04).

- *Ecosystem Management*

FAO and other national and international bodies are encouraging States to adopt an ecosystem approach to fisheries management, in which the effects of fishing are not only monitored and managed in respect of the stock of a particular fish species being caught, but also in terms of its effects on other fish species (multi-species models) and marine benthos organisms, algae, crustaceans, birds and mammals.

Obviously such monitoring and eventual management requires considerable investment. ICES is starting to implement an Ecosystem Approach to fisheries management. Reports from Peru and Chile to the Parliament Hearing showed that the Peruvian fisheries research institute (IMARPE) has established eco-system models based on over 30 years of species data. Chile has established two marine protected areas, with a third in the pipe-line.

- *Trimming*

Currently trimmings represent 35% of the total supply of raw material to the EU fishmeal industry. Trimmings have other outlets including pet foods and mink feed. The proportion going to fishmeal is estimated at 900.000 tonnes.

- *Discards*

As far as the problem of discards is concerned, it is estimated that fishermen discard up to 1 million tonnes of healthy fish, dead into the sea, every year within EU waters, simply because the fish are undersize, out of quota or due to high grading. Fishermen have been forced into this destructive and unsustainable behaviour in the name of conservation.

One of the first policies which must be pursued is to insist on all fish being landed. There should be tough penalties for anyone caught discarding fish. This is the policy in Iceland and Norway and the Faeroes. By insisting on everything being landed, scientists can get a more accurate picture of the size and nature of the catch, enabling more accurate stock recovery measures to be put in place and enabling more rapid action to be taken to close areas where juveniles are being caught.

Your *rapporteur* believes that to implement such a dramatic new initiative will require the implementation of a policy of incentives and fines. Fines to hit those who offend and continue to dump dead fish, but incentives, by way of financial compensation, to the fishermen who land fish they would otherwise have thrown over the side. The fishmeal and fish oil industry could buy the raw material. I believe that prices of up to 70 Euros a tonne could be expected which would be sufficient to encourage fishermen to land such fish, although not enough to encourage them to target these stocks. Landing discards for the meal and oil industry would increase the volume of production significantly, resulting in the EU being less dependent on imports. It would add a further estimated income of €70 million to the EU fishing industry.

6. CHALLENGES AND OPPORTUNITIES

Many fishmeal and oil companies are linked commercially with canning, freezing and filleting plants. Thus any growth in the human food markets for pelagic fish can readily be met by the food processing facilities. However, this opportunity should not be exaggerated. The condition of the industrial fish (small, bony and often inedible) limits the development of this market and the growth of the canned fish market is slow.

By contrast the development of the aquaculture sector is dynamic. Since the 1970s the growth has been nearly 9% per annum, with projected future growth to the end of this decade at 6% per annum. Nearly half of the world annual production of fishmeal is currently being used for aquaculture feed, and 80% of the fish oil. Future growth and intensification of the aquaculture industry may require increased quantities of fishmeal and fish oil. However, this development is likely to be off-set, primarily, by greater substitution of the oil, but also the meal with vegetable oils and proteins, respectively. In future the likely limited supplies of fish oil will lead to steady increases in prices with the products being diverted to strategic use within the aquaculture markets, away from grow-out diets. Fishmeal is unlikely to be in a shortage situation for the next 20 years or more. Currently fishmeal is being used in grow-out diets for land animals. It will be many years before fishmeal is only available for strategic use.

Discards are a complete waste of an important natural resource. Allowing the EU fishermen to land this material for conversion into meal and oil could produce an extra 200,000 tonnes of meal and 40,000 tonnes of oil. The extra fish oil will help meet the projected change in demand by the EU aquaculture feed industry during the next 10 years. The extra fishmeal will mainly find a market in land-animal feeds. It could add a further estimated annual income of €70 million to the EU fishing industry, increasing the present added value of the EU fishmeal and oil sector by 50%. About 500 extra jobs could be created in remote areas of the EU where unemployment is already high.

In 2001 the EU legislated against the use of fishmeal in ruminant diets as part of its emergency measures to protect humans and animals against TSE related diseases. The EU Commission confirmed in 2003 that fishmeal is not an intrinsic source of TSE (Scientific Opinion published on the 14/3/03 on the “feeding of wild fishmeal to farmed fish and recycling of fish with regards to risk of TSE”), but justified its continued ban on the use of fishmeal in ruminant diets on the basis that control methods were not reliable for distinguishing between fishmeal and other animal proteins in ruminant feed. The consensus was that it would not be possible to detect the presence of illegal meat and bone meal in ruminant feed, if fishmeal was allowed to be present.

In 2003, the Commission recognised that a new EU official method, which applied from 1st July 2004 (Commission directive 2003/126/EC), would adequately distinguish between fishmeal and other animal proteins, and thus drafted a proposal to lift the ban on fishmeal in ruminant diets. This proposal was resisted by the European Parliament.

The fishmeal and sections of the farming industries are claiming that the ban is not justified and is causing their industries harm. The fishmeal industry estimates that the ban has caused a loss of market of 100, 000 tonnes per annum in the EU ruminant sector and an additional 200,000 tonnes in the pig and poultry sectors. Although the latter two sectors do not have a ban on fishmeal use, legislation does not allow mills producing feed for ruminants, pigs and poultry (mixed mills) to have fishmeal on the premises. The estimated loss to the fishmeal industry world-wide is €130 million per annum, and to the EU industry alone is €10 million per annum, about 7% of the gross added value of the EU fishmeal industry.

Certain sections of the farming community have also suffered because of the ban. Sheep farmers in more remote areas of the EU (e.g. the highlands of Scotland) have reported increased mortality of sheep during lambing. Animal welfare problems have also been experienced by many breeds of growing calves, dairy cows, pig and chickens unable to obtain their genetically inspired nutritional requirements due to the absence of high protein fishmeal. The Commission has now confirmed that with fishmeal there is no intrinsic safety problems relating to BSE and control methods are now acceptable. Thus legislation banning fishmeal should be repealed as soon as possible, so that these markets can be recovered. Farmers and feed mixers not willing to add fishmeal to the ration can continue to exercise that right and even promote it if it is thought to lead to market advantages with the consumer. The restored fishmeal market in the EU should add a further 300,000 tonnes per annum to present demand.

In EU and North America consumers are increasingly taking nutritional supplements (nutraceuticals) to improve their health. One of the significant components of this market is EPA and DHA supplements. Although the added value of these products to the food supplement industry is considerable, to the fish oil industry it represents small volumes of crude oil (eg anchovy oil), with little added value. World wide the consumption of fish oil for these purposes is currently estimated at 25,000 tonnes per annum. Growth in the next 10 years could rise steeply, possibly to 65,000 tonnes per annum.

The future for fish oil is bright with both demand from aquaculture and the nutraceutical industry growing significantly. Supply will be limited by fish conservation measures, although in the future if the world follows the EU example on discards, supply could increase somewhat. However it is likely to be increased prices which will balance supply and demand.

Compared with fish oil, the outlook for the fishmeal sector is less certain. Fishmeal has the positive messages of health properties of omega 3 and the nutritional excellence of high protein. In many markets it has a good image. However, in certain markets such as the EU, the fishmeal and oil industry has a poor image mainly based on a lack of understanding of the industry, but further fuelled by some media and certain environment groups.

Your *rapporteur* believes that this report will be a step in correcting this unfortunate image in the EU of a globally important industry providing economy and employment to a number of less developed countries.

Your *rapporteur* calls for a lifting of the unjustified ban on fishmeal in ruminant feeds, which will help improve the image of fishmeal and restore its position as a highly beneficial feed in all classes of livestock. It will also help increase the value of the product injecting annually a further €130 million into the industry world-wide and an additional €10 million into the EU fishing sector.

In conclusion, the industrial fisheries sector is facing many challenges especially as far as sustainability, ethics and contaminants are concerned. Many of these challenges have actually been overcome or are being overcome by this industry, which however is still considered negatively by some sectors of the public in the European Union. Your *rapporteur* believes that this industry is sustainable, ethical and well managed, and that opportunities exist in the health benefits of fishmeal and fish oil products for animal as well as human diets. On the basis of the above, your *rapporteur* will call for a lift of the ban on feeding fishmeal to ruminants.

PROCEDURE

Title	Industrial fisheries and the production of fishmeal and fish oil		
Procedure number	2004/2262(INI)		
Basis in Rules of Procedure	Rule 45		
Committee responsible Date authorisation announced in plenary	PECH 13.1.2005		
Committee(s) asked for opinion(s) Date announced in plenary			
Not delivering opinion(s) Date of decision			
Enhanced cooperation Date announced in plenary			
Motion(s) for resolution(s) included in report			
Rapporteur(s) Date appointed	Struan Stevenson 25.11.2004		
Previous rapporteur(s)			
Discussed in committee	15.3.2005	25.4.2005	24.5.2005
Date adopted	24.5.2005		
Result of final vote	for:	14	
	against:	1	
	abstentions:	0	
Members present for the final vote	Elspeth Attwooll, David Casa, Zdzisław Kazimierz Chmielewski, Carmen Fraga Estévez, Ian Hudghton, Heinz Kindermann, Henrik Dam Kristensen, Rosa Miguélez Ramos, Philippe Morillon, Seán Ó Neachtain, Struan Stevenson, Catherine Stihler, Margie Sudre		
Substitutes present for the final vote	Duarte Freitas, Carl Schlyter		
Substitutes under Rule 178(2) present for the final vote			
Date tabled – A6	25.5.2005	A6-0155/2005	