The Committee will meet at 2.00 pm in Committee Room 1.

1. **Item in private:** The Committee will decide whether to take item 6 in private.

2. **Salmon Conservation (Scotland) Bill Stage 2:** The Committee will consider the Bill at Stage 2 (Day 2).

3. **Subordinate Legislation:** The Committee will consider the following instrument under the negative procedure—

   The Prohibition of Fishing with Multiple Trawls (No.2) (Scotland) Order 2000 (SSI 2000/405).

4. **Petitions:** The Committee will consider a report on the following petition—

   PE96 – Sea Cage Fish Farming.

5. **European Parliament Study Visit:** The Committee will consider its nominee to attend the study visit.

6. **Witness expenses:** The Committee will consider expenses claims received from witnesses.

   Richard Davies
   Clerk to the Committee
The following papers are relevant to this meeting:

Agenda Item 1: Salmon Conservation (Scotland) Bill:
- A marshalled list of amendments will be published on the day of the meeting, and groupings will be distributed to Members on the day.

Agenda Item 2: Subordinate Legislation:
- Copy of The Prohibition of Fishing with Multiple Trawls (No.2) (Scotland) Order 2000 (SSI 2000/405) and Executive note, are attached.

Agenda Item 3: Petitions:
- A Paper from the Reporters is attached.

Agenda Item 4: European Parliament Study Visit:
- A Paper from the Clerk is attached.
REPORTERS PAPER ON PETITION PE 96, MR ALAN BERRY
REQUEST FOR AN INQUIRY INTO
SEA CAGE FISH FARMING AND THE ENVIRONMENT

Background:

1. This petition was referred to the Rural Affairs and Transport and Environment Committees. The petition requests an independent inquiry into the environmental impacts of sea cage fish farming. The main environmental impacts of sea-cage fish farming have been suggested as: enrichment of the marine-environment from spilt food and fish waste; interbreeding and competition of escaped fish with wild fish stocks; transfer of pests and diseases to wild fish populations; pollution from the use of chemicals to treat fish diseases; conflict with other wildlife e.g. fish-eating birds and seals; and visual impact of inshore cages. The issues raised in the petition have been the subject of intense discussion and public interest over a number of years.

2. The petition was first discussed by the Rural Affairs Committee on 26 September and by the Transport and Environment Committee on 27 September. In recognition of the ongoing debate regarding the issues raised by the petition, both Committees agreed to support such an inquiry in principle, and to appoint reporters to consider the issue further. The reporters' remit was to give further consideration to the issues raised and to consider the mechanisms and terms of reference for such an inquiry. This paper provides further background information on the issues raised by the petition, and sets out a range of mechanisms for an inquiry, as identified by the reporters.

The Scottish Marine Fish Farming Industry

3. The Salmon farming industry has expanded substantially over the past two decades, and is an important source of employment in remote areas of Scotland. Scotland has around 350 marine salmon farms, along with a small but growing number of sites where other marine species such as halibut, sea trout, turbot and cod are farmed. Salmon farming represents over 95% of all marine cage fish farming.

Salmon Producers

4. Salmon production has become increasingly consolidated, with 15 companies accounting for 70% of production in 1997\(^1\). Over the past decade the number of producers has declined, but in 1997 there remained about 113 salmon farmers and 60 smolt (young salmon) producers. There has been a trend towards increasing foreign ownership of Scottish salmon farms, in 1996 foreign companies owned almost 50% of farms.

\(^1\) The Economic Impact of Scottish Salmon Farming, Scottish Office Economic Research Paper 1999
5. Production of farmed salmon has increased steadily over the last two decades, from 589 tonnes in 1980, to almost 127,000 tonnes in 1999. During this period the annual rates of production growth have varied between 10 and 35% per year.

Salmon Processors

6. There are around 70 small companies in the salmon smoking sub-sector, but the majority of smoked salmon production (82%) comes from the 12 members of the Scottish Salmon Smokers Association (SSSA). There has been a considerable integration between processors and producers.

Suppliers to the industry

7. There are around 150 firms involved in the supply of the Scottish sea-cage fish farming industry. Many of the specialist supply companies are SMEs. The largest companies involved in the supply of the salmon industry are the four feed companies, all of which are under foreign ownership. The largest salmon producers are often partially self-sufficient in services such as transport and veterinarians.

Employment and GDP

8. Direct employment in salmon production was 1623 Full Time Equivalents (FTEs) in 1997 (1437 full-time employees and 373 part-time). In 1990 there were 1659 FTEs in salmon production. Since 1990 salmon production has trebled, but there has not been a corresponding increase in employment associated with the industry. This is because of competition pressure and more efficient production in the enlarged companies that remain in the industry today. Larger companies have a per person productivity of 99 tonnes per employee compared to 9 tonnes in the smaller companies.

9. Employment in salmon processing was estimated to be 2,787 FTEs in 1997. The supply sector was estimated to support an estimated 1,383 FTEs. The spending of income generated in salmon farming, processing and supply sectors is estimated to sustain a further 540 FTE induced jobs. This gives a total of 6,334 FTEs for 1997 associated with salmon farming, of which an estimated 4,595 are located in the Highlands and Islands.

10. The GDP of the salmon farming industry was assessed for the first time in 1997. The GDP of salmon producers was estimated to be £50m with a turnover of £265m. The GDP of processors was estimated at £78m with a turnover of £243m, and the GDP of the supply sector was estimated at £56m. The total GDP of the salmon farming industry was therefore estimated to be £184m.

REGULATION OF MARINE FISH FARMING IN SCOTLAND

11. Marine fish farming in Scotland is regulated in three broad areas:

Planning controls
Control of pollution
Control of fish diseases

**Planning controls**

12. Property rights over the seabed between the low water mark and the limits of Scottish territorial waters are vested in the Crown. Leases for marine fish farms are granted by the Crown Estate Commissioners (CEC). When they receive an application the CEC consult with local interests and with Scottish Natural Heritage, but this is not a statutory requirement. Leases usually oblige the tenant to obtain the permission of the Transport Division of the Scottish Executive Development Department under the Coast Protection Act 1949 to ensure that the salmon cages do not constitute a hazard to the public right of navigation on the sea.

13. The Scottish Executive is currently consulting on proposals to bring marine fish farming within the scope of planning legislation. The proposals would introduce an exception for fish farming developments below the low water mark to be subject to planning control. Planning permission would operate in addition to other regulatory controls.

14. Although there are no planning controls at present, Environmental Impact Assessment (EIA) forms part of the process for considering applications for marine fish farm leases. The EC Directive on EIA (85/337/EC) as amended by Directive 97/11/EC seeks to ensure that where a development is likely to have significant effects on the environment, the effects are addressed in a formal environmental statement. The Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999 implement these requirements in the UK, and apply to proposed developments in sensitive areas, those designed to hold a biomass of 100 tonnes or more, or those that cover an area in excess of 0.1 hectares.

15. There is a further requirement that a fish farmer must, within two months of commencing of the business, notify the Secretary of State in writing of certain details under the Registration of Fish Farming and Shellfish Farming Business Order 1985.

**Control of Pollution**

16. Under the Control of Pollution Act 1974 and the Water Act 1989, effluent from fish farms is defined as trade effluent. Amendment of the Control of Pollution Act 1974 by the Environment Act 1995 makes it an offence to knowingly discharge trade effluent into controlled waters. Consents to allow discharges by fish farmers are issued by the Scottish Environment Protection Agency (SEPA) as part of the functions assigned to it under the Environment Act 1995. SNH are consulted by

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2 The Laws of Scotland, Stairs Memorial Encyclopaedia, Vol 11 paras 57-63
3 The Extension of Planning Controls To Marine Fish Farming: A Consultation Paper Issued by the Scottish Executive
SEPA as part of the assessment process. Consent conditions are site-specific and remain in place for a minimum of four years. Trade effluent from fish farming does not fit neatly under the terms of the Control of Pollution Act 1974, and as a result release consents issued by SEPA often have to be very detailed and long. SEPA has powers to require remedial action to be taken by fish farm operators if the conditions of release consents are not followed.

17. Legal proceedings instigated by the Scottish Sea Trout Group (a consortium representing wild fish interests) against SEPA had sought to establish whether sea-lice (a parasite of salmon and sea trout) are encompassed under the definition of trade wastes provided under the Control of Pollution Act 1974, but the case has been dropped.

18. Antifouling net treatments which are used to clean the nets used in fish farms are classed as pesticides, and their use therefore has to be licensed under the Control of Pesticides Regulations 1986. Registration of antifouling products is coordinated by the Health and Safety Executive (HSE). The HSE also has responsibilities to ensure the safe operation of fish farms under the terms of the Health and Safety at Work Act 1974. It has issued guidance on standards for the construction of floating fish farm installations used for marine fish farms.

19. Some chemicals used in marine fish farming are listed under List II of the EC Directive on Dangerous Substances (76/464/EEC). Member states are required to introduce programmes to reduce pollution by List II substances in compliance with water quality objectives. SEPA is responsible for setting Environmental Quality Standards to regulate water quality in Scotland.

Control of Fish Diseases

20. Under the Diseases of Fish Acts 1983 & 1937 areas can be designated where restrictions may be imposed on fish movements by fish farmers, and in which fish farmers may be required to take steps to prevent the spread of disease. Certain diseases of fish are notifiable under the Diseases of Fish Act 1937 and the Scottish Executive Rural Affairs Department (SERAD) must be informed of any outbreaks. The 1937 Act was introduced to control furunculosis (a highly infectious disease of salmonids), but similar controls have been introduced under the Act for other diseases such as Infectious Salmon Anaemia (ISA). In conjunction with the fish farming industry SERAD has established a set of guidelines for reacting to outbreaks of notifiable diseases. SERAD also has responsibilities under EC fish health legislation to prevent the introduction and spread of serious diseases of fish that may affect wild and farmed stocks.


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5 SEPA official, pers comm
6 The Laws of Scotland, Stairs Memorial Encyclopaedia, Vol 11 paras 57-63
22. Marketing authorisations have to be obtained for new medicines from the Secretaries of State for Agriculture and Health, who are advised by the Veterinary Products Committee (VPC).

WORKING GROUPS

23. The interaction between marine fish farming and wild salmonid stocks and the environment has recently been the objective of three Scottish Executive/fish farming industry/wild fishing interest working groups.

24. The Tripartite working group (TWG) was formed to address concerns raised by wild fishing interests about the effects of salmon farming on wild salmonids, particularly sea trout. The principal finding of the report is that co-operation between fish farming and wild fishing interests should be encouraged through the establishment of Area Management Agreements (AMAs). The main components of AMAs are the introduction of synchronised site fallowing (where all local farmers synchronise production and fallowing cycles) and sea lice control strategies. These measures are designed to reduce the spread of sea-lice from farmed to wild salmonids.

25. The TWG also raised the issue of escapes from fish farms, and consequently the Scottish Executive established an Escapes working group. The group’s report highlights the importance of implementing effective measures to prevent escapes, improving reporting arrangements, and of establishing mechanisms for recapturing fish if escapes do occur. Measures taken following the report are likely to include the development of a code of practice on fish containment, and the creation of a mandatory legislative requirement to notify escapes.

26. In October 1998 a Joint working group (JWG) on Infectious Salmon Anaemia (ISA) was established to identify risk factors associated with the disease, reduce risks from the disease in the future and review current industry practices. The JWG produced its final report in February 2000. The report contains practical measures to minimise the risk of ISA and recommends that these be enshrined in a code of practice. Scottish Ministers responded to the report in May and agreed that the best way to implement the recommendations of the JWG would be through a voluntary code of practice. The response also suggested that this code would be subject to close monitoring, and that statutory requirements could be imposed if producers did not follow it. An Aquaculture Health Joint Working Group has been established to develop this code of practice and monitoring requirements, and also has a more general work programme covering fish health, welfare, and notifiable diseases and contingency planning.

ENVIRONMENTAL IMPACTS OF SEA CAGE FISH FARMING

27. Atlantic Salmon are the principal species subject to sea-cage fish farming in Scotland. This means that the majority of impacts that have been reported are associated with salmon farming.
28. The main environmental impacts of sea-cage fish farming have been suggested as: enrichment of the marine-environment from spilt food and fish waste; interbreeding and competition of escaped fish with wild fish stocks; transfer of pests and diseases to wild fish populations; pollution from the use of chemicals to treat fish diseases; conflict with other wildlife e.g. fish-eating birds and seals; and visual impact of inshore cages.

**Nutrient Enrichment**

29. When large farms are located in sheltered sea-lochs there can be a considerable build up of fish wastes and spilt food on the sea-bed in the area around the cages. The material is broken down on the sea-bed by bacteria. Increased levels of bacterial activity depletes the amount of oxygen in the water, which can reduce the capacity of the loch to support other aquatic life. Fish Farms also release substantial quantities of soluble nitrogen and phosphorus. It has been alleged that the enrichment of sea lochs caused by increased concentrations of these nutrients is responsible for the development of summer algal blooms. Similar problems have been identified in relation to smolt farms in freshwater lochs. These problems can often be reduced by site rotation and falling which are intended to allow the seabed to recover from the build up of solid waste.

**Fish escapes**

30. Escapes of fish, sometimes in very high numbers, can occur as a result of winter storm damage to cages, predator damage to nets, or when fish are being transferred between cages. Fish farmers are required to notify the Scottish Executive of any escapes that occur. The Executive was notified of 15 incidents in 1999 involving up to 255,000 salmon. Escaped fish interbreed with wild salmon, and in 1998 approximately 1% of all salmon caught in Scotland were of farmed origin. Wild salmon populations tend to exhibit specific genetic adaptations to different river environments. Interbreeding with escaped farmed fish can therefore reduce this degree of adaptation.

**Diseases and Pests**

31. Diseases and pests can be a major problem for farmed Salmon, and can cause high losses amongst farmed stock.

32. **Infectious Salmon Anaemia** (ISA) is a contagious viral disease of salmon transmitted through water (from blood, faeces etc). An outbreak was first confirmed in May 1998 in Scotland. ISA is classified as a List I Disease under Directive 91/67/EEC. The legislation requires that suspicion of the disease must be reported. By August 1999 there had been 11 confirmed outbreaks, and 25 suspected outbreaks of ISA out of a total of 340 salmon farms in Scotland. The main concerns are the risk of transfer of this disease to wild populations of salmon, and the effects on the aquaculture industry because of restrictions imposed in the event of an outbreak.

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7 Written Answers 12th May 2000, S1W-6276
33. One of the more serious environmental problems associated with salmon farming is the transfer of sea lice from farmed stock to wild fish. Sea Lice (*Lepeopthirus salmonis*) parasitise both salmon and sea trout by feeding on their skin. With severe cases lesions on the head may result in the exposure of the skull or cause death through failure of the system of water balance. There has been a serious decline in stocks of sea trout (which are a migratory species similar to brown trout) and grilse (small salmon which only spend one winter at sea as opposed to the usual three or four) in rivers on the west coast of both Scotland and Ireland over the last twenty years, corresponding to the growth in both areas of salmon farming. It is thought that smolts (the name given to young salmon before their first sea winter) become infected with sea lice as they pass salmon cages in sea lochs and estuary mouths on their way to sea.

34. It has been alleged that incidents of algal blooms on the Scottish coastline which result in toxic shellfish poisoning outbreaks (eg, ASP, PSP, DSP) are linked to nutrient enrichment caused by effluents from salmon farms. These outbreaks of shellfish poisoning have led to the closure of the Scallop fishery around many parts of Scotland’s coast, which has had a serious impact on the fishing industry. However, at present there is no definitive scientific evidence to link nutrient enrichment from salmon farming to these blooms.

**Use of chemicals for pest and disease control**

35. The main method of controlling pests such as sea-lice is through the use of various chemicals. The most commonly used chemicals are Dichlorvos, Azamethiphos (both organophosphates (OPs)), Ivermectin (a broad-spectrum parasiticide also used in the control of parasites of sheep, cattle and pigs), Cypermethrin, Diflubenzuron and Hydrogen peroxide. The release of these chemicals into the marine environment has implications for non-target organisms, and there is evidence to suggest that the use of these chemicals can adversely impact upon marine ecosystems, (and, in the case of smolt farms, freshwater lochs).

**Interactions with predatory wildlife**

36. Salmon farms attract predatory wildlife, most commonly seals (common and grey) and birds (cormorants, shags, herons and gulls) which predate directly on the farmed fish or scavenge on the remains of dead fish. The Wildlife and Countryside Act 1981 requires fish farmers to obtain licenses for the control of birds, though seals may still be shot for the protection of fisheries under the Conservation of Seals Act 1970. There may be conflict of interests between fish farmers desire to control these species, and the requirements of conservation designations which aim to protect seals and fish eating birds.

**Visual impact of fish farm developments**

37. Proposals for marine fish farm developments do not require the approval of Local Planning Authorities. The Scottish Executive has recently consulted on proposals to bring marine fish farming developments within the scope of the planning
system. However this historical exclusion means that developments have not been subjected to rigorous controls of the planning system as regards their visual impact. The visual impact of some fish farms has been criticised, especially that of farms located in some of Scotland’s most beautiful sea lochs.

**MECHANISMS FOR INQUIRIES**

38. The subject matter of the petition clearly falls within the remit of both the Rural Affairs and the Transport and Environment Committee. Accordingly, consideration of the appropriate mechanism for an inquiry will require the involvement of both Committees.

39. Reporters have identified three possible mechanisms for an inquiry into the environmental impacts identified above. Options 1 and 2 involve using the existing parliamentary committee structure, while Option 3 proposes an independent inquiry. Both options 1 and 2 would require the Rural Affairs Committee and the Transport and Environment Committee to clearly identify their roles in these inquiries. In the event of a failure by the Committees to agree their respective roles, the matter may be resolved by the Parliament (on a motion from the Parliamentary Bureau) naming a ‘lead’ and ‘other’ Committee on this issue. Should the Committees wish to work together on this inquiry, there are several options, which are set out further below.

**Option 1 – Inquiry within the Parliamentary Committee System**

40. Under this option, a detailed inquiry would be mounted by a Parliamentary Committee or Committees. Such an inquiry could entail hearing witnesses, seeking Convener’s Group approval to undertake fact-finding visits to scientific laboratories and fish farms, and the preparation of a report. It would require some months to complete and would require the services of a dedicated adviser, due to the scientific and technical nature of the issues raised. There is a possibility that SPICe could also commission external research into this matter. However, this research request would require the approval of CG and would have to compete with bids put in by other Committees. Bids for external research are considered by the CG twice each year in May and November. It is unlikely therefore, that any bid for external research could be considered or approved by CG prior to May 2001.

41. As with all inquiries, it would require to be balanced against other ongoing committee business such as legislation, scrutiny of subordinate legislation, petitions and other inquiries and timetabled into the Committee’s work programme. Such an inquiry could be mounted, with agreement, by either the Rural Affairs or the Transport and Environment Committee. It could also be mounted jointly, or by a lead/other Committee as designated by the Parliament, as set out below.

**Option 2 – Limited Parliamentary Inquiry**
42. In essence, this would involve a short, focused inquiry, undertaken with a view to establishing options for further procedure.

43. Should the Committees wish to pursue either Option 1 or 2 then it would be necessary to use one of the mechanisms set out below enabling committees to work together. As with all inquiries, it would require to be balanced against other ongoing committee business such as legislation, scrutiny of subordinate legislation, petitions and other inquiries. Meetings would require to be scheduled within existing Committee time slots and be serviced by existing Committee resources (eg, SPICe, clerking staff).

Use of Reporters
44. If the two Committees could agree that one of them should take a lead role in this inquiry, then it would be possible for members of the second committee to be appointed as reporters. Using this mechanism would allow members of the second committee to contribute to all discussions and evidence sessions, however it would not permit them to attend meetings of the Committee in private (eg when a draft report is being agreed).

Designation by Parliamentary Bureau
45. Should both Committees have a strong interest in pursuing this inquiry, Rule 6.13.2 would apply. When a matter falls within the remit of more than one Committee, the Parliament may, on a motion from the Parliamentary Bureau, name one of the Committees as the lead Committee on the matter. If this occurs, the other Committee is asked to give their opinion to the lead Committee. This opinion would of course be taken into account in formulating any report of the lead Committee.

Joint Consideration with Approval of Parliamentary Bureau
46. Where a matter falls within the remit of more than one Committee, the Committees may, with the approval of the Parliamentary Bureau, decide to consider the matter jointly. (Rule 6.14) This would involve the Committees meeting jointly, with the meeting being convened by the convener of either Committee. All meetings require both Committees to be quorate. Any report produced following joint consideration of an issue is to be produced jointly by both Committees. This option has not previously been used in the Parliament and careful consideration would have to be given to how it would work in practice.

Option 3 – Independent Inquiry
47. It would also be possible for the Committee(s) to recommend to the Minister that an inquiry should be carried out, and that in view of the subject matter, this should be an inquiry independent of the Executive (although set up by it). There are examples of such inquiries to be found elsewhere (eg, the McCrone Committee of Inquiry into professional conditions of service for teachers). Typically, terms of reference are set for such inquiries, which may then take evidence, hold public meetings and commission research, (if required) and report to the Executive. It would be open to the Committees to recommend that an inquiry be set up to inquire into the environmental impacts identified above. Such
an inquiry would have the advantage of having resources devoted solely to the project.
Recommendation

48. After careful consideration of the issues, and given the urgency of the matters raised in the petition, it was agreed by Reporters that the subject was one which merited further inquiry and that such an inquiry would best be carried out by an independent body constituted for that purpose. It was further agreed that Reporters should recommend to the Committees that they should consider what terms of reference might be appropriate for such an inquiry, and thereafter make a recommendation in appropriate terms to the Executive.
NOMINATION OF RURAL AFFAIRS COMMITTEE MEMBER FOR EUROPEAN PARLIAMENT FAMILIARISATION PROGRAMME

Purpose

The Committee is invited to nominate at this meeting a member, which may be the Convener or another member, of the Committee to take part in a European Parliament-funded familiarisation programme.

Background

The European Parliament has agreed to fund a short familiarisation programme for a group of Scottish Parliament Committee Conveners and members. This is likely to take place in the Spring of 2001.

The aim is to familiarise members with the European legislative process and the operation of the European Parliament.

Much of the business of the Scottish Parliament is driven or affected by European legislation and policy. The Parliament has obligations within Community law. A good understanding of the European Union is important in helping members to work effectively in these areas.

Committee Office
Directorate of Clerking
December 2000