The Committee will meet at 9.30 am in the Chamber, Assembly Hall, The Mound, Edinburgh, to consider the following agenda items:

1. **Water Inquiry (in private):** The Committee will consider possible lines of questioning for witnesses on its inquiry into water and the water industry. 

   *Not before 10.00 am*

2. **Deputy Convener:** The Committee will choose a Deputy Convener.

3. **Future Work Programme:** The Committee will consider a proposal to inquire into the awarding of contracts for trunk roads maintenance.

4. **Water Inquiry:** The Committee will take evidence as part of its inquiry into water and the water industry from—

   - The Water Industry Commissioner for Scotland
   - Scotch Whisky Association

5. **Public Petition:** The Committee will consider Petition PE96 by Mr Allan Berry calling for the Scottish Parliament to hold an independent and public inquiry into the adverse environmental effects of sea cage fish farming, and the regulatory failure to both recognise and prevent significant damage to our natural heritage, the environment and other interests dependent on the integrity of our Scottish coastal waters.

6. **Rail Briefing:** The Committee will receive a briefing from Scottish Executive officials on current developments in the rail industry.
The following papers are relevant for this meeting:

<table>
<thead>
<tr>
<th>Submission from the Water Industry Commissioner for Scotland</th>
<th>TE/01/2/1</th>
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<tr>
<td>Agenda item 3</td>
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| Submission from the Scotch Whisky Association                 | TE/01/2/2 |
| Agendum item 3                                                |           |

| Committee covering note on Petition PE96, plus Reporters Paper | TE/01/2/3 |
| on the petition                                               |           |
| Agenda item 4                                                 |           |

Copies of Petition PE96 have previously been circulated to Committee members.
Evidence to the Water Inquiry by the Transport and Environment Committee of the Scottish Parliament

Statement by the Water Industry Commissioner for Scotland January 2001

Introduction

The Water Industry Commissioner was established under Section 12 of the Water Industry Act, 1999. I was appointed to the post by Scottish Ministers with effect from 1st November, 1999. My mandate and commitment is to promote the interests of customers. The legislation makes clear that this covers both current and potential customers of the Scottish water authorities. One of the most important aspects of my work is to advise the Scottish Executive (this contrasts with the executive role of the other UK utility regulators) on the revenue levels required by the Scottish water industry. This advice is framed in my Strategic Reviews of Charges, which are prepared on request from Scottish Ministers. After Ministers have taken their decisions on the revenue caps, I review the charges scheme of each water authority and ensure that the proposed tariffs fall within the caps on revenue. Separately, I maintain a regular dialogue with the Scottish Executive on the progress against the tasks outlined in my Corporate Plan and on initiatives to improve value for money for customers.

Consultation

I consult extensively with both domestic and non-domestic customers about their perception of the industry and the issues it faces. Consultation prior to my first Strategic Review, submitted December 1999, was inevitably limited by the time available, but I have subsequently developed a wide ranging consultation programme as listed below. The primary focus before the next Review, due at the end of 2001, is on improving the level of customer service and value for money. I also consult frequently with the water authorities to ensure access to information essential to the regulation of the industry and the promotion of customer interests.

Consultation with the domestic sector is achieved through:

• **Consultative Committees:** To date public meetings have been held in 12 towns across Scotland and it is planned to visit each local authority area at least once before the end of 2002. In addition each Committee has undertaken to meet separately with at least 50 community groups during each year. My function as chair of the Committees is primarily to hear feedback from members about their local consultations.

• **Consumer Panel:** 2,250 representative water authority customers selected by an independent market research company. Questions will consist of tracking questions to establish changes in view and also potentially significant strategic decisions, for example, about investment priorities.

• **Consultation with Domestic Sector Interest Groups:** I am planning a series of meetings with groups representative of the domestic sector. I have recently recruited an advisor, who will
work with me to ensure that this consultation is effective and will allow me to take full account of issues of affordability, special needs’ groups and sustainability in framing my advice.

• **Customer Complaints:** One of the most effective ways of understanding customer concerns is through monitoring complaints. This includes customer audits at the water authorities and reviewing the issues of those customers who contact us directly.

Consultation with the non-domestic sector is achieved through:

• **Consultative Committees:** For example meeting with local Chambers of Commerce and businesses.

• **One to One Meetings with Key Large Customers:** This includes large single or multi-site customers or trade groups which act as a group procurer on behalf of its members.

• **Large User Group:** I have established a Group of 10 large users which are broadly representative of the 130+ organisations, which use over 100 million litres per year. This Group meets regularly across Scotland, and will also establish sub-groups to assist my Office with input to service level initiatives.

• **Consultation Meetings with Representative Groups from the Non-Domestic Sector:** The Chairman of the Large User Group also assists me in meeting organisations representing the business economy in Scotland.

I am keen to extend and add variety to my consultations, even beyond these customer groups. For example, I am currently beginning to work with a small group of academics from Universities across Scotland to subject the analytical method and processes, used by my Office, to rigorous scrutiny.

**The Heritage of Under-Investment**

Over at least the last ten years, investment in the water industry in Scotland has been running at less than half the per capita level of those companies serving similar populations in England and Wales. Only in recent years have the investment implications of European Directives (and especially of the Urban Waste Water Treatment Directive) been addressed urgently. This demand for investment coincides with a customer driven need for modernisation of the existing underground pipe infrastructure and treatment works. By way of an example, there are nearly 47,000 kilometres of water mains and over 29,000 kilometres of sewers in Scotland. At best practice replacement costs of about £100,000 per km of water main and £300,000 per km of sewer, this equates to a replacement cost value of well over £13 billion.

**Customer Issues**

The amount paid directly by domestic customers has increased very markedly in the last few years. This has been explained by the phasing in of charges for wastewater services, by the equalisation of charges across the areas of the three water authorities and by the growth in revenue required to fund the significant increases in investment.

Non-domestic customers have also seen significant rises in charges, resulting from tariff equalisation and the need to fund the increased investment programme.

The charges faced by customers will depend on the long-run investment costs faced by an authority and the population available to cover these costs. In the current three authority system, the investment issues faced in the North of Scotland Water Authority area, with its relatively small number of households and businesses to share these expenses, will always be more difficult than in the Central Belt.
Levels of service have, however, improved markedly over the last four years, both in terms of the timeliness and the quality of the response to customer issues. The Guaranteed Minimum Standards, introduced following last summer’s consultation on service levels, ensure that the domestic customer can expect broadly the same level of service as that provided by other utilities. The non-domestic customer is also beginning to receive better service. Key Account Managers are now in place and are establishing what service the larger customer actually needs.

Major incident policy will now be made an integral part of the Code of Practice of each water authority. This will clarify the response expected of a water authority to a major incident. Our intention to introduce a water pressure standard from the end of this year was also broadly welcomed in last summer’s consultation and by the first results from the Customer Panel.

**Competition**

Competition in water services is not new - industrial customers have always had a choice to opt out of the public waste water collection and treatment system - and the 1998 Competition Act introduces not competition per se, but rather the concept of not unreasonably refusing access to ‘essential facilities’ (assets, which cannot be viably replicated). This may mean that the water authorities could not refuse to transport treated water from any third party (so called ‘common carriage’). It could also mean a retailer buying water in bulk from the water authorities and selling it on to customers on the public networks. The legal position of the authorities and potential new entrants in these areas is not completely clear. Thus in the absence of a framework of legislation, it would be up to the Courts in Scotland (or potentially Europe) to decide what should be done and how. I therefore welcome the prospect of Scottish legislation which will clarify the position in the interests of all customers.

There is also a growing market for providing water and waste water management services to customers. Scottish Courage recently concluded an agreement with Northumbrian Water for the management of the firm’s water services, with the aim of reducing consumption of these services. The effect of such agreements, though obviously good for businesses, their employees, and the economy generally, is to reduce the water authorities’ income. It is therefore in the interest of customers that the authorities themselves are now developing these water management services as a source of income.

The three Scottish water authorities are relatively small both on a UK and on an international comparison. This could limit their opportunities to develop their business outside Scotland. At present the Scottish customer is starting to benefit from the keen pricing of international water giants through PPP tenders. No doubt some customers would continue to benefit from unregulated competition, but it is important that competition brings value to all customers and not just to the few at the expense of the many, and I welcome the commitments on this made by the Scottish Executive.

**Costs**

None of the Scottish water authorities has sufficient revenue to cover all its outgoings. The balance of their needs is met through borrowing. This borrowing counts against Scottish Public Expenditure and therefore competes with the needs of health and education.

Debt inherited from Regional and Islands Councils in April 1996 was commuted by £700 million to leave £1000 million. Since the creation of the water authorities in 1996, debt will have increased to £1.9 billion, notwithstanding the further debt commutation and restructuring carried out by the authorities.

Loan debt outstanding at 31 March in each year:
Since we continue to under-invest in our water services infrastructure, increasing debt funding (other than to smooth price increases, to invest in capital projects significantly in excess of the long run average spend or to invest in spend to save projects) would simply store up problems for the future.

The costs of the water industry are largely fixed in the short run - they can be brought down but this will take time. The extreme is that investment decisions taken today could critically affect costs per customer for up to the next 100 years. Global warming already has to be taken into account in the framing of water industry capital investment decisions. The fixed cost base means that customer retention is critical and I am encouraged by the efforts of water authorities to retain customers, although there are still further improvements to be made in their cost analyses.

The breakdown of 2000-01 costs for each of the three water authorities can be summarised as follows:

<table>
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<tr>
<th></th>
<th>OPEX</th>
<th>Depreciation</th>
<th>Interest</th>
<th>PPP</th>
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<tr>
<td></td>
<td>£m</td>
<td>£m</td>
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<td>£m</td>
<td>£m</td>
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<tr>
<td>NoSWA</td>
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<tr>
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<td>174</td>
<td>75</td>
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<td>0</td>
<td>304</td>
</tr>
<tr>
<td>Total</td>
<td>392</td>
<td>172</td>
<td>129</td>
<td>22</td>
<td>715</td>
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</tbody>
</table>

It can be noted that interest charges already account for between 13% and 20% of the average bill. There are significant savings that can be made in operational expenditures, that is day to day running costs. We have collected very detailed information from the water authorities on all their assets and compared their running costs with those of companies south of the border. Using Office of Water Services techniques, modified to reflect Scottish conditions and in particular the unique operating environment of the Highlands and Islands, we have identified the extent to which there is a gap between the most efficient water services providers and the Scottish water authorities. The targets for 2005-06, which I announced last week for annual savings of:

- £66 million by West of Scotland Water Authority
- £44 million by East of Scotland Water Authority
- £24 million by North of Scotland Water Authority

are based on this analysis and, whilst achievable, constitute a real challenge for the water authorities.

Achieving these operational expenditure savings will free up some £65 from the average domestic customer to go towards the required investment programme - a sum which would otherwise have to be found through higher charges.

There are also savings to be made in the significant capital budget which will go a long way to limit the impact on the bills of all customers, although, even if these savings are achieved bills for neither the domestic nor non-domestic customer will fall.
Concluding Thoughts

No-one ever wants to pay more. Unfortunately Scotland has been under-investing and underpaying for the water services that were provided over many years and possibly decades. The customer will pay either today or tomorrow; either directly through charges or indirectly through taxation or foregoing other public services. My role is to try to ensure that costs are kept as low as possible and that the level of service improves both now and in the future. The transition to a modern, sustainable and competitive Scottish water industry is not easy, but it will yield long term benefits to customers.

Water Industry Commissioner for Scotland
Stirling
January 2001
The Scotch Whisky Association (SWA)  
The Malt Distillers Association of Scotland (MDAS)  

Evidence to Scottish Parliament Transport and Environment Committee’s Inquiry into Water and the Water Industry - 24th January 2001

- The SWA represents the whisky industry as a whole, at home and abroad. Its members cover over 95% of distilling, warehousing, bottling and trading in Scotch whisky. It works very closely with the MDAS, based in Elgin, which concentrates on issues specific to malt distilleries, especially environmental issues.

- Water is a fundamental raw material of Scotch whisky and is also used in the production process. Additionally, many whisky companies, particularly the larger bottling and grain distilling sites, rely on the water authorities for their water supply and treatment of sewage and effluent. The sector is an important user of Scottish water and water services.

- The SWA’s written submission to the Committee in September concentrated on two aspects: our views on the Scottish Executive’s consultation on Managing Change in the Water Industry, and our particular interest in the possibility of abstraction controls, being considered as part of the implementation of the Water Framework Directive. Both are again summarised below:

Change in the Water Industry

- Our views on this are similar to those of other large non-domestic users. We acknowledge the assistance of CBI Scotland and the Chemical Industries Association in preparing our evidence.

- The needs of business users from water and sewerage service providers are similar to our needs from suppliers of other goods or services: quality, continuity, customer service, a business-like approach and efficiency - all at the most competitive possible price.

- We believe that whilst significant progress has already been made, these qualities are most likely to flourish further in an even more competitive environment and we therefore welcome the extension of competition to new players; we are pleased to note that this has also been acknowledged by the three authorities themselves and by the Minister during his evidence.

- It may be that further efficiency gains could be achieved by closer working between the existing authorities; and it has been noted that this is already being examined. Several of our members have operations in all three water authority areas.

- The CBI has called for greater business representation on the boards of each water authority, and this is supported.

- The CBI’s figures suggest that business charges are cross-subsidising domestic water and sewerage services, and that they are higher than charges for equivalent businesses elsewhere in the UK - higher perhaps than can simply be explained by geographical differences. This is of concern. If competition is to be developed, greater standardisation and cost-reflectivity in pricing (so that it relates ever more closely to the services provided) will be needed, and charges should inevitably fall closer in line with those of comparable water and sewerage providers elsewhere. Business users should not subsidise domestic services.
Perhaps in anticipation of competition, large users are now beginning to reach tailored, set-term agreements with their water authority. This approach is welcomed. Whether or not it is applied, we wish to see more tailored customer service through account managers.

Members from time to time report problems with quality or reliability of supply (e.g., water pressure). These can be critical to distilling or bottling operations.

We support some extension of the powers of the Water Industry Commissioner, for example to supervising licensing of new water and sewerage providers. (Such licensing, and his powers, should however exclude private water supply arrangements). Effective benchmarking is crucial to his role and provision of adequate data to him should therefore be mandatory.

The Water Framework Directive - Abstraction Controls

90% of the water used by distilleries is for cooling purposes and is returned to its source without any diminution in quality.

Scotland is a water-rich nation. The majority of distilleries are situated in the Highlands, where the annual rainfall is among the highest in Europe. Distillery sites have been selected precisely because of the abundance of good water supplies, and the quotient of water drawn by the industry is in reality very small.

Most malt distilleries have their own water supplies, either owning the ground where the water rises or having the legal right to use the water resources in a catchment area. Legal rights to use water in the production process have also been acquired, often at considerable cost.

The industry would be deeply concerned if the enactment of the Directive led to abstraction controls, especially if the controls offer little or no environmental benefit. While we acknowledge that such controls may be necessary in some areas, they are largely unnecessary at the places where our distilleries are located. The European Commission recognised this and the Directive allows member states to exempt from controls abstractions that have no significant impact on water status.

Licensing of abstractions would force distilleries to apply and possibly pay for permission to draw their own water. Such controls are unnecessary, bureaucratic, and potentially very costly to an industry that must remain internationally competitive. The industry believes that it should not bear the considerable administrative costs of having to apply for an authorisation for present abstractions. Current abstractions should be automatically exempt unless the regulatory authority can demonstrate an adverse impact on the particular water resource which it seeks to control.

The industry is facing unprecedented pressure from a raft of different regulations. On its own, each new piece of legislation may not amount to a great burden, but the cumulative effect can be ‘death by a thousand cuts’. The Scottish Executive pledged in its recent ‘Framework’ for the Scotch Whisky industry to ensure that the regulatory burden is kept to a sensible minimum.

By invoking the exemption provision contained in Article 11 (d) of the Water Framework Directive, the Scottish Parliament has an opportunity to adopt European legislation in a manner that is appropriate to Scottish conditions.

SWA, January 2001
Mr Alan Berry

This petition was referred to the Rural Development and Transport and Environment Committees. The petition requests an independent inquiry into the environmental impacts of sea cage fish farming.

Progress of Petition

The Rural Development Committee first discussed the petition on 26 September and Transport and Environment Committee discussed it on 27 September. 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. A paper unanimously agreed by all reporters is attached for consideration by the Committee.

The Rural Development Committee considered this paper from reporters on Tuesday 19 December. The recommendations put forward by reporters were agreed, and it was further agreed to take the matter forward in conjunction with the Transport and the Environment Committee.

Possible Action by the Committee

The matter was discussed again on 16 January, and the Rural Development Committee agreed that if this Committee concurred with their views, Convener’s of both Committees should write to the Scottish Executive seeking to progress the matter further.

Recommendation

The Committee is requested to consider the paper put forward by reporters, and decide whether or not to adopt the recommendations put forward. If the recommendations are agreed, it is recommended that the Convener write to the Scottish Executive in conjunction with the Convener of the Rural Development Committee.

Tracey Hawe
Senior Assistant Clerk, Transport and the Environment Committee
January 2001
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.²

13. The Scottish Executive is currently consulting on proposals to bring marine fish farming within the scope of planning legislation³. 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.³

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 1995.⁴ SNH are consulted by SEPA as part of the assessment process. Consent conditions are site-specific.

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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
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-louse (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.


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).

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5 SEPA official, pers comm
6 The Laws of Scotland, Stairs Memorial Encyclopaedia, Vol 11 paras 57-63
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 fallowing 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.

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

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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 sea1.

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 peroxide1. 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, it is the unanimous recommendation of reporters that the Committees should agree to Option 3 as set out in this paper. It is the view of Reporters that an independent inquiry is the best way of proceeding with this matter, given the time and resources needed to conduct such an inquiry. Reporters further recommend that members familiarise themselves with the issues covered in this paper. If the Committees agree with the recommendation of reporters, it is also recommended that the two Committees meet jointly for one meeting to further flesh out the specific terms of reference for this inquiry.

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