How can we ensure fish welfare in Europe?

Global Veterinary Seminar on Animal Welfare
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Unit G3 Animal Welfare

The views expressed here are purely those of the writer and may not in any circumstances be regarded as stating an official position of the European Commission
Fish Welfare - beginnings

1789 - The question is not "Can they reason?" nor, "Can they talk?" but "Can they suffer?" – Jeremy Bentham

1990's - fish sentience?

1997 - Council of Europe started work on recommendations concerning farmed fish

5 June 2006 – applicable legal framework
Council of Europe recommendation concerning farmed fish

There are a number of requirements set to ensure the welfare of farmed fish.

a) stockmanship (training) and inspection
b) enclosures, buildings and equipment
c) water quality
d) provision of nutritious and balanced feed
e) handling
f) breeding
g) emergency killing
Stumbling blocks preventing proper implementation

Wide variety of farmed species (ca. 20) – marine cold water, fresh water, marine Mediterranean

- General biological principles the same
- Specific knowledge on feed, water quality, etc. essential

Different production systems
- welfare implications?
### Oxygen is complex

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Water quality

- water flow and exchange rate
- not only oxygen level (super-saturation, oxygen drop)
- also metabolites such as carbon dioxide, ammonia,
- temperature dependent
- pH and salinity
- temperature – too high/too low/rapid changes
Water quality – high technology
Handling – automated
Handling
Disease

- Focus on disease agent rather than biology
- Removal of dead and dying fish
Disease and water quality

- Malformations
- Stress
- Robustness

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<td>Value slaughtered salmon 2006: 15,600 million NOK (626,382 tonnes)</td>
<td>Quality downgrade: 5-7 NOK per kilo salmon</td>
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Sold 2012: 287.7 million salmon smolts
Value: 2,637 million NOK

Loss 2012: 37 million salmon
27.4 million due to disease, injuries and ill-adapted to seawater
Correct living environment

• Less susceptible to disease
• Better growth
Way forward

Experience → Knowledge
Research → Knowledge

SHARING KNOWLEDGE

Knowledge → Ensuring good welfare
Knowledge → Justification
Knowledge → Demonstrating benefits
Knowledge → Creating awareness
Knowledge → Motivating
Knowledge → Auditing
Enforcement?

Some countries do focus on fish welfare

No or few checks in EU

No training for officials in EU

No formal channels to exchange information

Questions are however being raised
Thank you for your attention