## Sustainable Aquaculture principles and emerging themes

### Overarching

#### 1. Sustainable aquaculture should be undertaken in a way that is environmentally, ethically, and economically acceptable for consumers, producers, and wider society.

- The group should consider the point at which whole system change should be encouraged, rather than looking for solutions to individual issues.

To discuss throughout

### Sustainable resource management to protect and conserve species, habitats and biodiversity

#### 2. Sustainable aquaculture must address the use of natural resources, protection and conservation of species, habitats and biodiversity in order to better protect the environment which both humans, domestic and wild animals share and reduce the ecological footprint of aquaculture as a whole.

**Medicines in the environment**

- There is growing concern about use of parasiticides in the small animal sector. This impacts on aquaculture as it leads to preconceptions about the use of these drugs for treating sea lice.

- Medicines regulation is different in aquaculture compared with other sectors. This affects how they are used, sometimes with unintended consequences, eg in In Norway, lower thresholds have led to lower efficacy.

- Regulating medicine use instead of discharge is easier, but for fish farms it is more important to monitor discharge.

- Medicines regulation needs to be made smarter to enable more products to be readily available. The main drivers for regulation include a very strong wild fish lobby.

To discuss in meeting #3

### Animal health and welfare

#### 3. Animal health and welfare should not be unnecessarily compromised to address human need. Aquaculture systems must work towards the positive health and welfare of all fish raised and used within them.

- To have a ‘good life’, and at least a ‘life worth living’, animals must have the opportunity to have positive experiences. Over time, positive experiences should outweigh negative.
experiences. This should encompass the whole of an animal’s life. Animal health and welfare should not be unnecessarily compromised to address human want or need.

- There is a lot of research being undertaken to determine what a life worth living looks like for a fish, but so far there is little evidence of which factors have a positive or negative impact. This will make it difficult to produce an evidence-based position, so the group is likely to need to recommend further research.
- The RSPCA welfare standards are generally considered to be the gold standard, which have been copied by organisations around the world. In the UK, nearly all Salmon and a majority of trout are covered by these standards, driven largely by demand from retail and consumers.
- The SAWG position should make it clear that fish do feel pain and are sentient beings.

To discuss in meeting #4

### 4. Slaughter processes should result in a humane death for fish, minimising avoidable pain, distress, fear, and suffering

- Slaughter processes should be designed to minimise avoidable pain, distress, fear, and suffering.
- Species-specific needs should be considered at all stages of the slaughter process, and all animals, including farmed finfish, should be effectively stunned before slaughter.
- We support the Farm Animal Welfare Council’s (FAWC) principles of humane slaughter as set out in the FAWC opinion and reports on the welfare of farmed animals at slaughter or killing.
- Slaughter [...] is the final event in a farm animal’s life. The following principles must be observed if slaughter [...] is to be humane with minimal pain, suffering and distress:
  - All personnel involved with slaughter [...] must be trained, competent and caring
  - Only those animals that are fit should be caught [or penned], loaded and transported to the slaughter site
  - Any handling of animals prior to slaughter must be done with consideration for the animal’s welfare
  - In the slaughter facility only equipment that is fit for the purpose must be used
  - Prior to slaughter of an animal, either it must be rendered unconscious and insensible to pain instantaneously or unconsciousness must be induced without pain or distress
  - Animals must not recover consciousness [before] death ensues

To discuss in meeting #4

### Role of the veterinary profession

### 5. Although the vet-led team model is not appropriate in this sector, veterinary professionals should play an active role in aquaculture, as part of a vet-inclusive team.

- This hub and spoke model is unlikely to suit the aquaculture industry, as historical reasons including fish not being included in the veterinary surgeons act, have led to vets not being as closely involved or having the correct expertise for this model to work. A vet inclusive team may be better terminology for this sector.
- The veterinary profession could potentially be a helpful voice in the regulatory bodies, but currently has very little influence on regulation.
- It is important to recognise the different role of the vet in aquaculture and what they can influence. Vets will often get a request for a prescription for a specific medicine, rather than for a diagnosis.

To discuss in meeting #2

6. **The veterinary profession as a whole should work to improve its understanding of aquaculture**

- Fish vets need to do more to communicate with others to avoid misrepresentation. The sustainable aquaculture position may help to share some of that necessary information.

To discuss in meeting #2

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**Welfare outcome assessment**

7. **Animal health and welfare outcome assessments should form part of production system key performance indicators.**

To discuss in meeting #3

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**Emerging trends: breeding, technology and innovation**

8. **New technologies and innovative models used to improve the contribution of animals, be that in terms of the production of food, animal feed or environmental goods, must not compromise the welfare needs of the animals in question.**

To discuss in meeting #5

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**Themes last updated: February 2022**