

# Animal Welfare in Aquaculture

## Why does it matter?

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Open  
Philanthropy  
Project



# Why does animal welfare in aquaculture matter to you?

- Your company values
- Consumer assurance
- Quality of product



# Why does animal welfare in aquaculture matter to us?



## Our Vision

A world that embraces and enables the role of responsibly farmed seafood in meeting global nutrition needs.

Because it is an indicator of best aquaculture practice  
Upholding animal welfare globally  
Research and development

# The best standards in aquaculture welfare:

*The best animal welfare standard creates boundaries not barriers and support the farmers to do the critical thinking*



## CULTURE CONDITIONS AND HUSBANDRY

### Environmental conditions

Incorporated into all BAP standards. Checklist and raw data, site selection.

### Stocking density

Record stocking density and be informed by production performance data.

### Survival

Monitored to detect timing of any acute episodes as well as calculated at harvest



# The best standards in aquaculture welfare

*BAP certified farms seek first the best systems and then the data*



## Feeding

Feeding levels should be in farm records to allow independent auditing of feeding consistency and as a proxy for feed response and vitality. Temperature dependent. Raw data

## Handling

Classification of handling into 'likely to physically damage for example/scale loss scoring index. Likely related to species and size. Training by use of optimal technique by video. Checklist and evaluation of training

## Crowding

Working volumes recommended, use of aeration/DO levels/duration of crowding event. Scoring system from best to worst conditions

# GAA Fish Welfare Project

*In late 2017 GAA received funds from Open Philanthropy with the goal to evaluate and update fish welfare standards for aquaculture*



The objectives of the project are:

- Review current farmed fish welfare standards
- Identify areas where improvements are needed
- Recommend changes to the BAP standards

The initial focus of this project is on three key, internationally important species: salmon, tilapia and catfish; however any changes to the BAP standards would likely impact all BAP-certified species

# GAA Fish Welfare Project in 5 Parts



## Part 1 Evaluation of current fish welfare practices (complete)

- Literature review of current practices and latest research
- Evaluate current practices from multiple welfare standards
- Identify fish welfare indicators

### **Animal Welfare Indicators from Sterling report incorporated into Farm Standard 3.0:**

4.6: Mortalities; body condition factor; lesions, abrasions or fin damage; and gill damage or condition shall be measured in each production unit as individual-based welfare indicators

4.7: Water quality shall be measured in each production unit as group-based welfare indicators of environmental quality

4.8: Feeding response and swimming behavior shall be measured in each production unit as group-based welfare indicators of behavior.

**Part 2 Field trials** Part 1 identified that education of staff and humane slaughter were two key areas with the most ability to create change in welfare.

Effectiveness of electrical stunning during catfish processing - Auburn University (USA) (completed)

Establishing insensibility in electrically stunned tilapia and quality implications – Nautilus Collaboration, Silsoe and Regal Springs

Literature review on insensibility to inform the trials

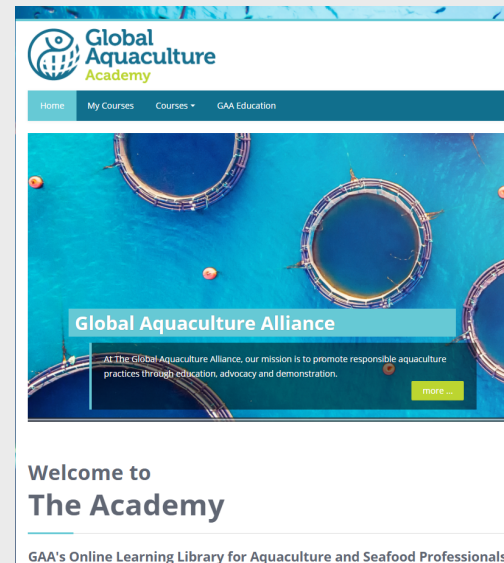


## Part 3 Develop online educational material

**Training material for staff at farms and processing plants will be developed to deliver best fish welfare**

Modules have been developed by Dr Christine Huynh, a specialist in aquatic animal welfare specific to aquaculture, in collaboration with GAA staff

- 1) Sentience in Aquatic Animals
- 2) Finfish RAS or live holding systems
- 3) Finfish Semi-closed systems
- 4) Finfish Open systems e.g. sea cage
- 5) Fish treatments and antibiotic use
- 6) Humane harvesting methods
- 7) Humane euthanasia





# GAA Fish Welfare Project

**Part 4 Communicate project results:** Results of the project will be communicated via regular blog updates, newsletters and events such as this one.

**Part 5 Incorporate most important elements into the BAP standards:**

Upon completion of the project the committee will submit a final report of recommended updates to the BAP farmed fish welfare language in the BAP standards. This report will be reviewed by the Standards Oversight

**We are making progress**  
Committee

This is a 3-year project. Part 1 of this project has concluded. With the global pandemic we have had to postpone some of Part 2 - humane slaughter trials but we are making good progress with the education modules and should have those available soon.

# Finally, some more GAA advances in welfare.....

Seafood Processing Standard (SPS)

Issue 5.0 – 1 – February – 2019



- 8.1 Transport
- 8.2 Holding Facilities
- 8.3 Slaughter

<https://seafoodassurances.org>



# Thank You



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