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Haarlem, 28rd of August 2017

Subject: Response to the Anderson Cabot Center for Ocean Life at the New England Aquarium

Dear Matt,

Many thanks for taking the time to provide your comments on the GSSI Benchmark Report for the Global Aquaculture Alliance's BAP Certification Standard.

GSSI is committed to a transparent benchmark process with opportunity for engagement and comments. Following the consultation, GSSI's detailed response to your comments by component number raised in relation to the GSSI Benchmark of the BAP Certification Standard is set out below.

Section A Governance

Supplementary Component A.1.09.01
The Scheme Owner has procedures for taking into account the special circumstances of data deficient and/ or small-scale fishery/aquaculture operations.

Anderson Cabot Center comment: *The iBAP improvers program is separate from the certification and should not be used for GSSI recognition purposes however the IOM is a good example of compliance.*

GSSI response: The iBAP program is a step wise approach to BAP certification which directly addresses one of the fundamental challenges for small scale operations - meeting all compliance requirements at once, without the technical knowledge or tools. As an improvement approach (the "i" stands for "improver) it functions to on-ramp small-scale farms that are seeking to become certified, by bringing them into the system and begin steps towards sustainability. This program addresses another fundamental challenge-access to capacity building and tools by providing technical support for those in the program. The program requires an agreed to a step-by-step, deadline-driven plan for full certification. As such it increases access for small scale farms while providing support and incentives to move towards full BAP certification.

Updated link https://www.bapcertification.org/Certification

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In addition, the Integrated Operating Module (IOM) is an approach to group farms through a management entity which can include sponsorship by a processor, farmer group or another legal entity. The managing entity assumes responsibility and coordinates the implementation of BAP certification with its individual farmers, while offering a central point for access to inputs and delivery of training. The group mechanism is designed to address barriers of small and medium sized farmers – organized legally or not – to more efficiently access resources, including certification. Page 1: "Farms that wish to participate in the BAP certification program may do so individually with or without a sponsor, or they may be organized as part of a group of farms under the active assistance of a sponsoring organization […] IOM Farm Units: 1. Only small to medium-sized farms may participate in IOM Farm Units. Production limits per farm depend upon the species being cultured […] 5. All farms in an IOM Farm Unit are registered under a single application and pay a single application fee. Auditing costs are minimized, since audits are generally scheduled within the same time period, thereby reducing travel costs and auditor travel days" IOM units are subject to the same certification requirements " p2. "Audits: 1. All Sponsored Individual Farms and IOM Farms participating in the BAP certification program are subject to annual audits and must meet the requirements of the BAP FARM STANDARDS."

In response to Anderson Cabot Center's comment, the conclusion of the Supplementary Component A.1.09.01 has been updated to demonstrate that BAP GAA BAP Program takes the special circumstances of data deficient and/ or small-scale fishery/aquaculture operations into account and is in alignment with the GSSI Component.

Conclusion on GSSI Supplementary Component A.1.09.01

Conclusion: The GAA BAP Program is in alignment because the BAP program can be started as iBAP program (i signifies 'improver'). Applications to iBAP are open to all and the application process is explained online, accessed via the 'iBAP' tab. The program requires an agreed to a step-by-step, deadline-driven plan for full certification. As such it increases access for small scale farms while providing support and incentives to move towards full BAP certification.

In addition, the Integrated Operating Module (IOM) is an approach to group farms through a management entity which can include sponsorship by a processor, farmer group or another legal entity. The managing entity assumes responsibility and coordinates the implementation of BAP certification with its individual farmers, while offering a central point for access to inputs and delivery of training. The group

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mechanism is designed to address barriers of small and medium sized farmers – organized legally or not – to more efficiently access resources, including certification.

References:
Desktop review:

GAA/BAP website explaining the iBAP process:
http://bap.gaalliance.org/bap-certification/ibap/

List of ibap facilities
http://bap.gaalliance.org/find-certified-facilities/ibap-facilities/

Summary of Best Aquaculture Practices (BAP)
Programs & Requirements for Sponsoring Individual Farms & Integrated Operating Module Farms – IOMs: http://bap.gaalliance.org/wp-content/uploads/sites/2/2015/02/Summary-of-BAP-Sponsored-Farm-Programs-Nov-2015.pdf (Issue 2 Nov 2015, page 1)

Desk Review- Internal Document.
BAP Programs & Requirements for Certification of Individual Farms & Integrated Operating Module Farms – IOMs. BAP Farm Programs Overview. Version 1, May 2013. Page 1 and 2

Essential Component A.3.04
A work program is prepared and made publicly available at least every six months, including:
– Scheme Owner's name and address
– the list of standards currently under preparation;
– the list of standards currently under reviewing or revision;
– the list of standards which were adopted in the preceding period.

Anderson Cabot Center comment: *GSSI refers to two examples of workplans available online however these are not easily accessible by searching the site. There is no dedicated space for this on the BAP webpage. The intent of this EC is not being fully met.*

GSSI response: Updates in the website include a dedicated location to access the latest workplan under the Standards Page https://www.bapcertification.org/Standards- "View the latest BAP standards review schedule."

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In response to Anderson Cabot Center's comment, the reference section of the Essential Component A.3.04 has been updated to demonstrate that GAA BAP Program includes an easily available workplan on the web page and is in alignment with the GSSI Component.

Conclusion on GSSI Essential Component A.3.04

Conclusion: The GAA BAP Program is in alignment because the review schedule for BAP standards is publicly displayed online and included in the minutes of the SOC (Standard Oversights Committee) meetings.

References:
Desktop review documents:
BAP Standards Review Schedule (October 2015)

http://bap.gaalliance.org/wp-content/uploads/sites/2/2015/02/BAP-Proposed-Work-Program-for-Standard-Setting-and-Revision.pdf

Current standard review schedule available online (downloaded 4april2017):
https://www.bapcertification.org/wp-content/uploads/2017/01/Proposed-Work-Program-for-Standard-Setting-and-Revision-updated-from-Portsmouth-SOC-minutes-March-2017.pdf

Office audit - Standard review schedule reviewed online.

Latest workplan under the Standards Page
https://www.bapcertification.org/Standards- "View the latest BAP standards review schedule"

Section C Aquaculture: Finfish & Crustaceans

Essential Component C.1.08

The standard requires the aquaculture facility has operational fish health management practices, specifically favoring effective biosecurity and available vaccines, including introductions and transfers of farmed animals where relevant, which is overseen by an aquatic animal health professional.

Anderson Cabot Center comment: *Both the GSSI Essential Component language and Guidance section reference favoring the use of available vaccines as a biosecurity approach; vaccines are not mentioned in Clause 17.1 or 14.8. Vaccines are mentioned in the Guidance section of Standard 15. Food safety but only referring to legal permission to use. While this is a minor absence, vaccines are an important potential tool for biosecurity and should be referenced in the biosecurity plan to fully meet this EC.*

GSSI response: The focus of this GSSI Essential Component is on the establishment of an operational fish health management plan, emphasizing preventative measures, with biosecurity and vaccines as recommended options. The language of the GSSI Essential Component and Guidance statements encourages but does not mandate the use of vaccines, which are but one preventative approach. The range of preventative measures required by BAP is detailed in the standard. Although the evidence provided by the Scheme Owner (BAP 17.1 and BAP 14.8) does not specify vaccines as part of the Health Management Plan, their use is implicit in statements such as requiring "active control measures" for disease control. The BAP Guidance that refers to vaccines states: "Vaccines and anesthetics, where employed, shall be approved and used only according to manufacturers' instructions." The core part of this GSSI Essential Component, a requirement for "operational fish health management practices" is met by the BAP standard, which requires a biosecurity plan linked to a health management plan.

In response to Anderson Cabot Center's comment, the conclusion of the Essential Component C.1.08 has been updated to demonstrate that BAP Finfish and Crustacean standard includes requirements for operational fish health management practices and is in alignment with the GSSI Component.

Conclusion on GSSI Essential Component C.1.08

Conclusion: The BAP scheme is in alignment because the BAP Finfish and Crustacean Farm Standard - Issue 2 - September 2014 requires a written, detailed biosecurity plan with a focus on preventative controls. This plan must link to the Health Management Plan (BAP Section 14). Although the evidence provided by the Scheme Owner (BAP 17.1 and BAP 14.8) does not specify vaccines as part of the Health Management Plan, their use is implicit in statements such as requiring "active control measures" for disease control.
The standard also contains the following clause:
BAP 17.1: The applicant shall have in place biosecurity controls that seek to prevent the introduction and spread of disease agents and disease on the farm, including the

sanitization of equipment and personnel when disease is suspected or confirmed at the farm site, and these shall be detailed in a biosecurity plan as described in the Implementation guidelines:
• Identifies the likely disease risks for the culture species within its culture region.
• Links the biosecurity plan to the overall farm animal health and welfare plan.
• Requires routine disease surveillance and characterization of the health status of the farm.
• Identifies critical control points such as movement of animals and equipment, and farm access by visitors.
• Establishes active control measures to reduce the risk of introduction and/or spread of disease agents past these control points.
• Establishes hygiene and sanitization protocols and standards for equipment and personnel.
• Establishes quarantine protocols for diseased animals, where possible.
• Prevents the movement of personnel and equipment from diseased areas both within the applicant farm and from neighboring farms.
• Establishes protocols that allow the tracking of animal and equipment movements.
• Establishes a visitor and delivery log.
• Establishes a method of tracking actions taken to reduce the risk of disease and/or control disease if it occurs.
Furthermore, requirements for a health management plan are covered by the following clause:
BAP 14.8: Health management procedures shall be defined in a health management plan or operating manual, reviewed and approved by a fish health specialist, that includes procedures to avoid the introduction of diseases, protocols for water quality management, health monitoring and disease diagnosis techniques.

References:
BAP Finfish/Crustacean Farm Standards – Issue 2, Revision 3 – November 2016, Section 14, Clauses 17.1 and 14.8.
Available online at: https://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf

Essential Component C.2.02

The standard requires appropriate controls for all chemicals, incl. veterinary drugs, that enter the environment (whether already covered by GSSI Essential Components or not) in order to minimize adverse impacts on environmental quality.

Anderson Cabot Center comment: *EC C.2.02 refers to the use of chemicals and drugs that may enter the environment rather than storage or disposal. GAA includes "use" in its language in Standard 13.1 and 15.6 excludes illegal chemicals; consistency with the EC is questionable without references to Safety Data Sheets or requiring the farm to conduct a risk assessment (for example, antifoulants in standards 15.4 considers contamination of aquacultured animals but not surrounding environmental quality).*

GSSI response: The BAP Finfish and Crustacean Farms standard has 10 of 20 sections that pertain to "Environment" in various ways. With respect to C.2.02, the key sections of the BAP Finfish and Crustacean Farm standards are Section 13 (Environment: Storage, Disposal of Farm Supplies and Wastes) and Section 15 (Food Safety: Drug and Chemical Management).

This GSSI component requires "appropriate controls" of chemicals used in aquaculture. These are covered in BAP Section 13 that lays down requirements for chemical and drug use in a safe and responsible manner. The emphasis of BAP Section 13 is placed on safe storage and safe handling, both of which are essential in preventing release to the environment and potential negative environmental impacts. "Safe and responsible use" of chemicals is a component of the BAP Finfish and Crustacean Standard (see BAP 13.1).

Regarding drug use, a health management plan that is overseen by a qualified veterinary specialist must be in place. This health management plan uses best practices. BAP 15.2 states, in part: If used, drug treatments shall be based on recommendations and authorizations overseen by a fish health specialist…. Thus, storage, handling, application and consideration of environmental effects are all the responsibility of the fish health specialist, even though the specific responsibilities are not spelled out in the standard.

Although the GSSI Essential Component requires "appropriate controls for all chemicals…that enter the environment" the BAP standard identifies, specifies and defines controls against potential environmental contamination arising from anti-foulants, metabisulphites, diesel fuel and salt, considered to be of higher environmental risk than other chemicals. In the case of antifoulants, the Guidance in BAP Section 15 indicates that environmental impact is a consideration, in addition to the potential contamination of farmed animals.

The BAP Finfish and Crustacean Farms standard includes a section (18) on Traceability that lays out record-keeping requirements. Although record-keeping by itself does not act as a check on chemical use per se, it can be seen as another type of "appropriate control" on

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chemical and drug use. For traceability, records on antibiotic and drug use, sulfite use in shrimp, herbicide, algicide and other pesticide use, among others, must be maintained. Section 18 states "Traceability ultimately assures purchasers that all steps in the production process were in compliance with environmental, social and food safety standards."

In response to Anderson Cabot Center's comment, the conclusion of the Essential Component C.2.02 has been updated to demonstrate that BAP Finfish and Crustacean standard includes requirements for handling of chemicals and is in alignment with the GSSI Component.

Conclusion on GSSI Essential Component C.2.02

Conclusion: The BAP scheme is in alignment because the BAP Finfish and Crustacean Farm Standard - Issue 2 - September 2014 because Section 13 lays down requirements for chemical and drug use in a safe and responsible manner, specifying that: "Chemicals such as insecticides, herbicides, algicides, sodium metabisulfite used in shrimp, and detergents shall be stored in locked, well-ventilated water-tight buildings. The buildings' concrete floors should slope to a center basin for containing spills. Warning signs shall be posted." Controls on storage and handling are essential in preventing release to the environment and potential negative impacts which is the objective of this GSSI Essential Component. In addition, the BAP standards also define controls against specific potential environmental contamination arising from anti foulants, metabisulphites, diesel fuel and salt:
BAP 13.1: Fuel, lubricants, feed and agricultural chemicals shall be labeled, stored, used and disposed of in a safe and responsible manner.
BAP 13.10: Secondary fuel containment shall conform to BAP guidelines for fuel storage.

Section 15 specifies that: "Cage farms making use of antifoulants shall obtain all necessary authorizations for their use."
BAP 15.4: Any use of antifouling agents must involve recognized applications of approved materials in a manner that can be monitored for potential contamination of the aquacultured animals. The Guidance in BAP Section 15 indicates that environmental impact is a consideration. It states, "Use of certain antifouling materials on farm facilities and containment structures can introduce potential environmental contaminants".

BAP 19.3: Sulfite solutions shall be deactivated or neutralized, for example by 48-hour retention, prior to release into natural water bodies.

References:

BAP Finfish/Crustacean Farm Standards – Issue 2, Revision 3 – November 2016, Section 13, Clauses 13.1 and 13.10; Section 15, Clause 15.4; Clause 19.3 Available online at: https://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf

Supplementary Component C.2.02.1

The standard prohibits chemicals used on the aquaculture facility and that may enter the local environment due to farming practices that are listed as highly polluting by relevant organizations or other justification.

Anderson Cabot Center comment: *As detailed in the SC Guidance, consistency is supposed to be based on guidance that goes beyond national legal compliance and have some justification for their inclusion in the standard. This is not met by BAP currently.*

GSSI response: The issue here is related to the stringency of regulation on chemical use. The "base level" is adherence to national regulation. The "higher bar" is indicated by this supplementary component as adherence to a specific set of criteria that define "highly polluting," as codified by the WHO and the Rotterdam Convention Annex III. Given that these documents are not cited in the standard, nor is "highly polluting" defined, the BAP standard is therefore not in alignment with the GSSI Benchmarking Tool for this Supplementary Component.

In response to Anderson Cabot Center's comment, the conclusion of the Supplementary Component C.2.02.01 was modified to "Not in Alignment" and removed from the Benchmark Report.

Conclusion on GSSI Supplementary Component C.2.02.1
Conclusion: Not in alignment.
References:

Essential Component C.3.02

The standard requires that aquaculture facility infrastructure is appropriately maintained in order to prevent pollution, whether from construction, operation or decommissioning (e.g., including the following requirement: A requirement for derelict or damaged gear to be collected and disposed of responsibly.)

Anderson Cabot Center comment: *Relevant additional references for preventing escapes and maintaining infrastructure include standards 11.1-11.3, 11.5-11.6. However clauses to collect derelict gear aren't clearly stated. Given the wide range of production systems covered by the GAA standard, it would be expected for the farm to conduct its own risk assessment and action plan on top of the current specific BAP standards that are listed.*

GSSI response: This GSSI Essential Component is about appropriate infrastructure maintenance. The term "appropriate" can be taken to include a number of approaches, including one based on a risk assessment. The lack of a specific requirement for collection of derelict gear is not grounds for a judgment of non-alignment. The derelict gear collection requirement is given as an example (as indicated by "e.g.") of proper decommissioning.

The entire BAP standard has been built around a set of good management practices and is intentionally designed to address pollution risks. This GSSI component is concerned with pollution and the BAP standard is in alignment because large sections of the BAP standard are aimed at controlling pollution:
Section 4. Environment: Mangrove and Wetland Conservation (Ponds and other land-based systems only)
Section 5. Environment: Effluent Management
Section 6. Environment: Water Quality Control
Section 7. Environment: Sediment Control
Section 8. Environment: Soil and Water Conservation, Pond Sludge Management

Further examples of BAP content, which cover examples mentioned by GSSI, include:

BAP Section 13 which states: "Trash, garbage and other farm waste, including discarded farm machinery and equipment, shall not be dumped in mangrove areas, wetlands or vacant land, or allowed to accumulate on farm property. Such waste shall be disposed of responsibly."
BAP 13.6: Garbage and other solid waste, including fouling organisms, shall be disposed of to comply with local regulations and avoid environmental contamination and odor problems (e.g., recycling, burning, composting or placing in a legal landfill).

BAP 13.10: Secondary fuel containment shall conform to BAP guidelines for fuel storage.
BAP 13.4: Precautions shall be taken to prevent spills, fires and explosions, and procedures and supplies shall be readily available to manage chemical and fuel spills or leaks. Designated staff shall be trained to manage such spills and leaks.

Conclusion on GSSI Essential Component C.3.02

Conclusion: The BAP scheme is in alignment because major sections of the BAP Finfish and Crustacean Farm Standard - Issue 2 - September 2014 are aimed at controlling pollution:
Section 4. Environment: Mangrove and Wetland Conservation Ponds and other land-based systems only
Section 5. Environment: Effluent Management
Section 6. Environment: Water Quality Control
Section 7. Environment: Sediment Control
Section 8. Environment: Soil and Water Conservation, Pond Sludge Management
In addition, BAP Section 13 states: "Trash, garbage and other farm waste, including discarded farm machinery and equipment, shall not be dumped in mangrove areas, wetlands or vacant land, or allowed to accumulate on farm property. Such waste shall be disposed of responsibly."
BAP 13.6: Garbage and other solid waste, including fouling organisms, shall be disposed of to comply with local regulations and avoid environmental contamination and odor problems (e.g., recycling, burning, composting or placing in a legal landfill).

References:
BAP Finfish/Crustacean Farm Standards – Issue 2, Revision 3 – November 2016, Sections 4, 5, 6, 7, 8 and 13, Clause 13.6
Available online at: https://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf

Supplementary Component C.4.04.1

The standard requires independent verification that the feed manufacturer that sources, for whole fish ingredients greater than 1% content;
- fishmeal and fish oil that are traceable back to the species, fishery and country of origin, and

- fishmeal and fish oil with less risk of detrimental environmental impacts, such as those certified a standard benchmarked at minimum consistent with relevant FAO's ecolabelling guidelines and that uncertified sources must be identified as low risk by independent risk assessment or must come from sources that are part of an effective Fishery Improvement Project (FIP) towards a suitable certification or that have been assessed to show limited impacts on stock status and ecosystem impacts as defined in Principle 3 of the FAO (2011). Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture.

Anderson Cabot Center comment: *As outlined in the guidance for this SC "verification is expected to include 3rd party certification or audit of the feed manufacturer". This builds on the assurance of C.4.04 which requires documentation from the feed mill. GAA's standard 9.6 requires documentation and not an audit of the mill and is therefore not consistent with this SC. BAP three-star (where the feed mill is certified) and four-star certifications would be consistent with this SC.*

GSSI response: The requirement of an independent audit of a feed mill to evaluate whether requirements are met is achieved in the case of certified facilities that use feeds from a BAP-certified feed mill. However, certified producers are not required to use feed from BAP-certified mills, only that the feed used by a certified producer meet certain requirements. As the current scope of GSSI recognition is for 2 star (Farm) certification the default conclusion must be that the BAP standard is not in alignment.

In response to Anderson Cabot Center's comment, the conclusion of the Supplementary Component C.4.04.01 was modified to "Not in Alignment" and removed from the Benchmark Report.

Conclusion on GSSI Supplementary Component C.4.04.1
Conclusion: Not in alignment.
References:

Supplementary Component C.4.04.4

The standard requires the efficient use of fishmeal and fish oil relative to the production system and the species being farmed.

Anderson Cabot Center comment: *Consistency here is challenged by a lack of a maximum upper limit for unnamed species - this could be really important if a farmed tuna operation (with FI:FO numbers up in the 10's) were to be certified; thus BAP is only partially consistent with this SC.*

GSSI response: A lack of an established upper limit of the FIFO ratio for unnamed species is not grounds for establishing a lack of alignment. The BAP standard defines an upper limit for the most commonly traded finfish species (not including salmonids in this standard). Establishing such an upper limit is established in the Guidance for this GSSI Supplementary Component. Hundreds of species are used in aquaculture and it is not practical at this time to establish upper limits of the FIFO ratio for minor species. Tuna farming is excluded from the BAP Finfish and Crustacean Farm standard, which only certifies production based on hatchery production of seedstock.

Conclusion on GSSI Supplementary Component C.4.04.4

Conclusion: The BAP scheme is in alignment because the BAP Finfish and Crustacean Farm Standard - Issue 2 - September 2014 includes the following clauses:
BAP 9.4: The facility shall calculate and record a final yearly fish in:fish out ratio for completed crops.
BAP 9.5: The fish in:fish out ratio shall not exceed the following values*: Litopenaeus vannamei* – 1.2, *Penaeus monodon* – 1.7, Tilapia – 0.7, Pangasius – 0.5 Limits have not yet been fixed for other species, and will be added once adequate data has been accumulated. For other species the values shall be recorded as information only.
References:
BAP Finfish/Crustacean Farm Standards – Issue 2, Revision 3 – November 2016, Clauses 9.4 and 9.5
Available online at: https://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf

Essential Component C.6.05

The standard requires that suitable measures are in place to ensure that hatchery-raised seed are free from relevant/important pathogens before stocking for grow-out.

Anderson Cabot Center comment: *While BAP has a broad requirement for Aquatic Health Management, it does not appear to specifically require that hatchery-raised seed are free from relevant/important pathogens before stocking, as such consistency with this EC is questionable.*

GSSI response: It is true that there is no specific requirement that hatchery-raised seed are free from relevant pathogens before stocking in the BAP standard. The key phrase in the GSSI Essential Component is "suitable measures in place." The BAP standard is in alignment because requirements for aquatic health management are comprehensive and require a biosecurity plan that includes likely vectors for biosecurity risks and the identification of critical control points. Introduction of fingerlings and other seed are an obvious critical control point that would be addressed in an appropriate biosecurity plan. Sections of the standard also include a requirement for a health management plan that includes procedures for avoiding the introduction of diseases (Section 14) and refer to the specific pathogen-free or specific pathogen-resistant status of stocking material (Section 10).

BAP Section 17 covers biosecurity and requires that: "The likely vectors for these risks shall be identified in a detailed written biosecurity plan that identifies specific farm staff responsible for its implementation, includes specific control measures and at a minimum:
• Identifies the likely disease risks for the culture species within its culture region.
• Links the biosecurity plan to the overall farm animal health and welfare plan.
• Requires routine disease surveillance and characterization of the health status of the farm.
• Identifies critical control points such as movement of animals and equipment, and farm access by visitors.
• Establishes active control measures to reduce the risk of introduction and/or spread of disease agents past these control points."

In response to Anderson Cabot Center's comment, the conclusion of the Essential Component C.6.05 has been updated to demonstrate that BAP Finfish and Crustacean standard requires suitable measures in place to ensure that hatchery-raised seed are free from relevant/important pathogens before stocking for grow-out and is in alignment with the GSSI Component.

Conclusion on GSSI Essential Component C.6.05

Conclusion: The BAP scheme is in alignment because the BAP Finfish and Crustacean Farm Standard - Issue 2 - September 2014 BAP, Section 17 covers biosecurity and requires that: "The likely vectors for these risks shall be identified in a detailed written biosecurity plan that identifies specific farm staff responsible for its implementation, includes specific control measures and at a minimum:

• Identifies the likely disease risks for the culture species within its culture region.
• Links the biosecurity plan to the overall farm animal health and welfare plan.
• Requires routine disease surveillance and characterization of the health status of the farm.
• Identifies critical control points such as movement of animals and equipment, and farm access by visitors.
• Establishes active control measures to reduce the risk of introduction and/or spread of disease agents past these control points."

Introduction of fingerlings and other seed are an obvious critical control point that would be addressed in an appropriate biosecurity plan. Sections of the standard also include a requirement for a health management plan that includes procedures for avoiding the introduction of diseases (Section 14) and refer to the specific pathogen-free or specific pathogen-resistant status of stocking material (Section 10).

Additionally, the standard includes the following clauses:

BAP 17.1: The applicant shall have in place biosecurity controls that seek to prevent the introduction and spread of disease agents and disease on the farm, including the sanitization of equipment and personnel when disease is suspected or confirmed at the farm site, and these shall be detailed in a biosecurity plan as described in the Implementation guidelines above.

BAP 17.2: Farm staff shall be trained in biosecurity procedures and shall, along with all visitors, comply with them.

BAP 14.5: Disease outbreaks shall be managed through rapid diagnosis and treatment, and when necessary, humane slaughter.

BAP 14.7: When ill, deformed or unmarketable specimens are removed, they shall be documented and killed by humane techniques, with the carcasses disposed of responsibly in accordance with applicable local and state regulations.

BAP 14.8: Health management procedures shall be defined in a health management plan or operating manual that includes procedures to avoid the introduction of diseases, protocols for water quality management, health monitoring and disease diagnosis techniques.

BAP 10.1: The facility shall maintain accurate records of the species farmed and, where relevant, any significant stock characteristics, including but not limited to non-native, specific pathogen-free, specific pathogen-resistant, hybrid, triploid, sex-reversed or genetically modified (GMO) status.
BAP 10.3: The facility shall keep records of sources and purchases of stocking material, and record the number stocked in each culture unit for each crop.
BAP 18.6: The facility shall maintain complete and accurate records of the sources and numbers of postlarvae or fingerlings stocked, stocking dates and all feeds used for each culture unit.

References:
BAP Finfish/Crustacean Farm Standards – Issue 2, Revision 3 – November 2016, Section 17, Clauses 17.1, 17.2, 14.5, 14.7, 14.8, 10.1, 10.3, 18.6
Available online at: https://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf

Supplementary Component C.8.03.1

Where appropriate (e.g., land-based pond and flow-through systems, particularly in water resource limited region), the standard requires metric limits are placed on the fresh water consumption and prevention of aquifer drawdown.

Anderson Cabot Center comment: *This SC is only partially met by the limits on aquifer drawdown as the standard does not place metric limits on freshwater consumption overall.*

GSSI response: The BAP standard does not establish metric limits on fresh water consumption, but does set metric limits on aquifer drawdown. The standard takes the approach of giving producers flexibility in achieving a no aquifer drawdown limit, without defining a limit on the consumption of fresh water. The Guidance statement for this GSSI Supplementary Component requires that metric limits be explicitly defined.

In response to Anderson Cabot Center's comment, the conclusion of the Supplementary Component C.8.03.01 was modified to "Not in Alignment" and removed from the Benchmark Report.

Conclusion on GSSI Supplementary Component C.8.03.1

Conclusion: Not in alignment.

References:

Section C Aquaculture: Salmon

Supplementary Component C.1.08.2

The standard requires the aquaculture facility to determine the cause of death when losses are significantly greater than expected and the cause is unclear, use laboratory analysis where feasible.

Anderson Cabot Center comment: *While BAP's requirements are very broad, they do not specifically address the use of laboratory analysis where the cause of greater than expected losses is unknown.*

GSSI response: The GSSI Supplementary Component suggests that the use of laboratory analysis to determine the cause of mortality "where feasible," providing flexibility in the interpretation and application of this GSSI Supplementary Component. The BAP standard requires a Health Management Plan, approved by an accredited fish health professional, that addresses health monitoring, disease diagnosis and treatment, and presumably laboratory analysis would be undertaken if such capacity is available.

Conclusion on GSSI Supplementary Component C.1.08.2

Conclusion: The BAP scheme is in alignment because the BAP Salmon Farm Standards - Version 2 - May 2015 includes the following clause:
BAP 10.1: The applicant shall designate an accredited fish health professional to oversee the Fish Health Management Plan, direct the diagnosis and treatment of fish diseases and coordinate activities with neighboring farms under an Area Management Agreement, where such an agreement is in place (see Section 2). The fish health professional shall be available in person or by phone at audit to answer questions. The applicant shall notify the certifying body if the fish health professional changes.
The Fish Health Management Plan must include procedures for disease diagnosis including:
• Monitoring for endemic or locally identified parasitic, bacterial and viral infections, and recording of findings and actions taken, which may or may not be mandated by government.

• Guidelines on indicators for disease that direct farm staff as they tend fish or remove dead fish from the cages, and provide procedures for timely reporting if an indicator is observed.
• A written response plan to be followed by the fish health professional to ensure rapid diagnosis if disease is suspected, followed by prompt treatment.
• Written procedures based on current guidelines for best professional veterinary practices on how medicinal treatments with drugs, vaccines or anesthetics, and any non-medicinal use of chemicals (i.e., for disinfection or water treatment) shall be selected and administered in order to minimize risks to human health and the environment.
• Written procedures for recording withdrawal times to minimize the risk of residues remaining in the fish.
• Where possible and where the welfare of the fish will not be compromised by delay in treatment, a procedure for antibiotic sensitivity or resistance testing prior to each subsequent course of treatment with the same antibiotic and for recording of trends.

References:
BAP Salmon Farm Standards – Issue 2 – Revision 3 October 2016, Clause 10.1; Fish Health Management Plan.
Available Online at: https://www.bapcertification.org/wp-content/uploads/2017/01/BAP-SalmonF-1016.pdf

Essential Component C.2.02

The standard requires appropriate controls for all chemicals, incl. veterinary drugs, that enter the environment (whether already covered by GSSI Essential Components or not) in order to minimize adverse impacts on environmental quality.

Anderson Cabot Center comment: *This EC is focused on the use of chemicals and their environmental fate rather than storage; the language in the BAP standard (including reference to MSDS) doesn't clearly focus on the appropriate use of chemicals and, as such, consistency with the EC is not clear.*

GSSI response: This GSSI Essential Component requires "appropriate controls" of chemicals used in aquaculture. The BAP requirements provide appropriate controls for veterinary drugs, parasiticides, antifoulants, and other chemicals and wastes. These are addressed in Section 8, via controls on storage and handling, both essential in preventing release to the environment and potential negative impacts, which is the objective of this GSSI Essential Component. Detailed controls on the use of veterinary drugs are covered in Section 10.

In response to Anderson Cabot Center's comment, the conclusion of the Essential Component C.2.02 has been updated to demonstrate that BAP Finfish and Crustacean standard requires appropriate controls for all chemicals, incl. veterinary drugs, that enter the environment and is in alignment with the GSSI Component.

Conclusion on GSSI Essential Component C.2.02

Conclusion: The BAP scheme is in alignment because the BAP Salmon Farm Standards - Version 2 - May 2015 provides appropriate controls for veterinary drugs, parasiticides, antifoulants, and other chemicals and wastes. These are addressed in Section 8, via controls on storage and handling, both essential in preventing release to the environment and potential negative impacts, which is the objective of this GSSI Essential Component.
In detail, the clauses have the following content:
BAP 8.1: The applicant shall have a written Material Storage, Handling and Waste Disposal Plan that includes the BAP requirements for proper handling and disposal as outlined in the implementation requirements above and be able to demonstrate compliance with it.
BAP 8.2: Farm staff shall be familiar with the MSHWDP and trained in aspects of it they may be required to implement. This will be tested at audit by interview.
BAP 8.4: An inventory shall be kept of all hazardous materials or wastes (chemotherapeutants and materials that are hazardous to people) stored on or disposed of by the farm.
BAP 8.5: Material safety data sheets shall be available for all hazardous materials.
BAP 8.6: Fuel, lubricants and chemicals shall be labeled, stored and disposed of in a safe and responsible manner and marked with warning signs.
BAP 8.7: Precautions shall be taken to prevent spills, fires and explosions, and procedures and supplies shall be readily available to manage chemical and fuel spills or leaks.
BAP 8.9: Garbage and other solid waste shall be disposed of in compliance with local regulations and shall avoid environmental contamination.
BAP 8.10: If any farm nets are treated with copper or other toxicant-based antifouling materials, cleaning procedures shall collect, treat and dispose of wash water in compliance with national regulations regarding collection, treatment and disposal of such toxic wastes.
BAP 8.11: In farms that are shifting from the use of antifoulants to in situ net cleaning, copper-based antifoulant-treated nets may be cleaned in situ if the nets have first been cleaned ashore by approved methods (8.10) and not retreated before redeployment.

BAP 8.12: The applicant shall have a written waste reduction plan and be able to demonstrate compliance with it, including a program to test alternatives to the use of toxicant-based antifoulant paints on farm nets.
BAP 10.9: If used, drug treatments shall be based on authorizations by the fish health professional, who shall be guided by the FHMP and principles of best practice for the veterinary profession. The health professional shall prescribe medicines only to treat diagnosed diseases in accordance with instructions on product labels and national regulations.

References:
BAP Salmon Farm Standards – Issue 2 – Revision 3 October 2016, Clauses 8.1, 8.2, 8.4, 8.5, 8.6, 8.7, 8.9, 8.10, 8.11, 8.12 and 10.9.
Available Online at: https://www.bapcertification.org/wp-content/uploads/2017/01/BAP-SalmonF-1016.pdf

Supplementary Component C.4.04.1

The standard requires independent verification that the feed manufacturer that sources, for whole fish ingredients greater than 1% content;
- fishmeal and fish oil that are traceable back to the species, fishery and country of origin, and
- fishmeal and fish oil with less risk of detrimental environmental impacts, such as those certified a standard benchmarked at minimum consistent with relevant FAO's ecolabelling guidelines and that uncertified sources must be identified as low risk by independent risk assessment or must come from sources that are part of an effective Fishery Improvement Project (FIP) towards a suitable certification or that have been assessed to show limited impacts on stock status and ecosystem impacts as defined in Principle 3 of the FAO (2011). Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture.

Anderson Cabot Center comment: *As outlined in the guidance for this SC "verification is expected to include 3rd party certification or audit of the feed manufacturer". This builds on the assurance of C.4.04 which requires documentation from the feed mill. GAA's standard 5.1 requires documentation and not an audit of the mill and is therefore not consistent with this SC. BAP three-star (where the feed mill is certified) and four-star certifications would be consistent with this SC.*

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GSSI response: The requirement of an independent audit of a feed mill to evaluate whether requirements are met is achieved in the case of certified facilities that use feeds from a BAP-certified feed mill. However, certified producers are not required to use feed from BAP-certified mills, only that the feed used by a certified producer meet certain requirements. As the current scope of GSSI recognition is for 2 star (Farm) certification, this component was no longer judged in alignment.

In response to Anderson Cabot Center's comment, the conclusion of the Supplementary Component C.4.04.01 was modified to "Not in Alignment" and removed from the Benchmark Report.

Conclusion on GSSI Supplementary Component C.4.04.1
Conclusion: Not in alignment.
References:

Many thanks again for participating in the public consultation and we do hope that the above responses have been helpful. We look forward to a continued collaboration and dialogue going forward.

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