RESTORATIVE MANGROVE AQUACULTURE CONCEPT LOGIC AND PROGRAM STANDARDS

SRALLY GROUND

MANGROW



Selva Shrimp

| Scope of Standard | This standard encompasses the entire supply chain for shrimp raised and harvested in integrated mangrove forest aquaculture (IMA) including shrimp hatcheries, farms, harvesting, collecting and consolidation stations, final product manufacturing and packing. | |
|---------------------------|--|--|
| Applicability | icability This standard applies to all shrimp packed and commercialized under Blueyou's Selva Shrimp brand worldwide. | |
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1. Introduction

Blueyou's Selva Shrimp program has been established in 2008 with the purpose of promoting shrimp raised by smallholder community farmers in integrated mangrove aquaculture systems (IMA) in Southern Vietnam.

From the beginning, the Selva Shrimp program consisted of three main components: (1) Technical framework for farm level improvements and mangrove restoration based on specific standards for farming operations and shrimp hatcheries; (2) standards for chain of custody and traceability applicable to the supply chain of harvested shrimp from farmers to licenced processing plants and (3) 3rd party verification and auditing scheme including guidelines for auditing by conformity assessment bodies (CAB).

As the Selva Shrimp program has been successfully established on global markets as a consumer brand and a benchmark for restoratively farmed shrimp, Blueyou decided to adapt the program and allow for inclusion of other origins of farmed shrimp from integrated mangrove aquaculture worldwide. Accordingly, this document outlines and defines the relevant parameters for the future Selva Shrimp program.

2. Objectives and Components of the Program

The Selva Shrimp program aims at creating a blueprint and an advanced business model for integrated, restorative mangrove aquaculture at scale: Today, - more importantly than ever -, there is an urgent need for mangrove restoration at large scale. Of the same importance is the need for our societies and markets to reform global food systems and create protein harvesting systems which respect the planetary boundaries.

Blueyou's ambition with Selva Shrimp is to serve both these needs in an economically viable fashion, including the participation of coastal communities and smallholder farmers as the stewards of thriving local habitats.



Intertidal zones in tropical countries that have been subject to mangrove deforestation are often left abandoned or being used as aquaculture ponds with low yields and economic returns. Through mangrove restoration in combination with the introduction of best aquaculture practices, such degraded zones can increase productivity, gain back biodiversity and be converted into functional mangrove habitats that not only sequester significant amounts of carbon, but provide the basis for a restorative, resilient and socially inclusive blue food harvesting systems.

The Selva Shrimp program has four key objectives:

1. Create and maintain **a solid verification and auditing framework** for restorative mangrove aquaculture in a variety of geographies, adapted to different intertidal mangrove foodscapes worldwide;

2. Develop, implement and operate a **digital traceability system** for safeguarding the integrity of supply chains from farming origins to finally manufactured and packed products;

3. Secure a viable **participation of coastal communities and smallholder farmers** in the program and allow for cost-efficiencies and scale in accessing and performing 3rd party auditing and certification;

4. Create a **scientific database and continuously monitor blue carbon**, **mangrove coverage and biodiversity benefits** of integrated mangrove aquaculture systems in all project areas of Selva Shrimp.

3. Verification and Auditing

In line with the objectives of the program, Blueyou is defining the framework for verification and auditing in all sites where Selva Shrimp are produced, harvested, and packed. For the verification of the farm origins, the restoration and conservation of mangroves, the implementation of good aquaculture practices and the integrity of supply chains, Blueyou is implementing a two-level verification and auditing system:

| First Level: | Assessment, verification and 3 rd party auditing against the |
|--------------|---|
| | principles and standards of Selva Shrimp, specific for the |
| | referring mangrove foodscape |
| | |

Second Level: Assessment and certification according to independent 3rd party standard approved by ISEAL alliance

For realizing a maximum of efficiency and prevent duplication of audits and verification procedures on local farm level, the underlying smallholder farmers' organization structures, units of internal control (ICS), or farmer units for group auditing are integrated into a combined auditing system for all standards accordingly.



4. Standards for Mekong River Foodscape

Applicability: Intertidal shrimp farming zones in the Southern Mekong River delta of Vietnam. Zones are regulated under local legislation by provincial decrees in dedicated, integrated mangrove farming zones, managed by local forest management board (FMB).

| | Indicator | Criteria |
|---|---|--|
| F.1 | Compliance with all applicable legislation | Yes |
| F.2 | Source of PL's for active stocking | Hatcheries only / No allowance for wild-caught PL's |
| F.3 | Allowance for passive influx of wild PL's | Yes |
| F.4 Allowance for organic natural fertilizers and compost from Yes within the farm boundaries ¹ | | Yes |
| F.5 | Allowance for use of antibiotics | No |
| F.6 | Allowance for use of chemicals and synthetic fertilizers | No |
| F.7 | Allowance for use of external ² feed | No |
| F.8 | Minimum surface ratio Mangroves ³ / Water | 50% / 50% |
| F.9 | Reforestation of mangrove areas with defined species of mangrove plants ⁴ | Yes |
| F.10 | Active predator control | None⁵ |
| F.11 | Protection of endangered species ⁶ | Yes |
| F.12 | Documentation of all inputs (PL's and fertilization (F.4)), harvest / sales of shrimp | Yes |
| F.13 | Group approval for small-scale farmers ⁷ | Yes |
| F.14 | Stocking density | Natural density (< 10 PL's / m²) |
| F.15 | Genetic modified Organisms (GMO) | Use of GMO not allowed |

¹ Organic fertilizers such as compost are allowed if the organic material comes from the referring farm (internal organic materials) and as long as they are applied in a controlled and well-documented manner.

⁷ See "SELVA SHRIMP® Criteria: Farm Group Approval" for reference



² Definition of external: All materials not sourced from within the farm.

³ Definition of mangrove forest surface: Surface area of farming operation that is covered by mangrove plants (i.e. this excludes dykes, land for buildings, roads, etc). Mangrove plants include primary forest as well as newly reforested areas.

⁴ To safeguard the functionality of the ecosystem, a variety of species, preferably endemic, must be considered. The overall diversity shall be as close to the previous natural habitat as possible. Alien species must not be introduced.

⁵ Exception: for fish allowed by natural substance (e.g. Saponine)

⁶ Species classified by IUCN Red List TM as endangered (EN) or critically endangered (CR) or as listed in the Vietnamese Red Data Books (Volume 2: Plants, 1996 and Volume 1: Animals, 2000)

5. Standards for North Kalimantan Foodscape

Applicability: Intertidal shrimp farming zones in North-Kalimantan (Indonesia) with specific focus on the river deltas of the Bulungan and Sesayap rivers. Aquaculture areas in North Kalimantan are regulated on a national level by the ministry of marine affaires and fisheries (MMAF) as well as by the provincial marine and fisheries authorities (Dinas Kelautan dan Perikanan).

| | Indicator | Criteria |
|------|--|--|
| F.1 | Compliance with all applicable legislation | Yes |
| F.2 | Source of PL's for active stocking | Hatcheries only / No allowance for wild-caught PL's |
| F.3 | Allowance for passive influx of wild PL's | Yes |
| F.4 | Allowance for probiotics, organic natural fertilizers and compost from within the farm boundaries ¹ | Yes |
| F.5 | Allowance for use of antibiotics | No |
| F.6 | Allowance for use of chemicals and synthetic fertilizers | No |
| F.7 | Allowance for use of external ² feed | No |
| F.8 | Minimum surface ratio of mangroves ³ / water | 50% / 50% |
| F.9 | Reforestation of mangrove areas with defined species of mangrove plants ⁴ | Yes |
| F.10 | Active predator control | None⁵ |
| F.11 | Protection of endangered species ⁶ | Yes |
| F.12 | Documentation of all inputs (PL's and fertilization (F.4)), harvest / sales of shrimp | Yes |
| F.13 | Group approval for small-scale farmers ⁷ | Yes |
| F.14 | Stocking density | Natural density (< 10 PL's / m2) |
| F.15 | Genetic modified Organisms (GMO) | Use of GMO not allowed |

¹ Organic fertilizers such as compost are allowed if the organic material comes from the referring farm (internal organic materials) and as long as they are applied in a controlled and well-documented manner. The application of probiotics is allowed and the ingredients to culture probiotics before the application in the ponds (such as rice bran or sugar) don't need to originate from the referring farm. 2 Definition of external: All materials not sourced from within the farm.

4 as close to the previous natural habitat as possible. Alien species must not be introduced. 5 Exception: for fish allowed by natural substance (e.g. Saponine) 6 Species classified by IUCN Red List TM as endangered (EN) or critically endangered (CR) or species listed in the Government Regu-Itation No. 7 of 1999 concerning the Conservation of Species and Fauna, updated through the list of protected species based on the Ministry of Environment and Forestry Regulation No. P.106/2018 7 See "SELVA SHRIMP[®] Criteria: Farm Group Approval" for reference



³ Definition of reforested area: Surface area of farming operation that is reforested by mangrove plants (i.e. this excludes dykes, land for buildings, roads, etc). Mangrove plants include primary forest as well as newly reforested areas.

6. Standards for Bay of Guyaquil Foodscape

Applicability: Coastal aquaculture in Ecuador with specific focus on the bay of Guayaquil. Zones and aquaculture activities are regulated on a national level under the Fisheries and Fisheries Development Law by the the National Council for Fisheries Development. The Selva Shrimp System in Guayaquil differs from the farming systems in South-East Asia in that the farms are built outside of the mangrove areas in former salt marshes. Therefore, mangroves are not growing within but directly adjacent to the farming area, fulfilling important ecosystem functions. As no mangroves were cut during the construction of the ponds, the Selva Shrimp Standard for the Bay of Guyaguil foodscape does not require active mangrove reforestation within the ponds.

| | Indicator | Criteria |
|------|--|--|
| F.1 | Compliance with all applicable legislation | Yes |
| F.2 | Source of PL's for active stocking | Hatcheries only / No allowance for wild-caught PL's |
| F.3 | Allowance for passive influx of wild PL's | Yes |
| F.4 | Allowance for probiotics, organic natural fertilizers and compost from within the farm boundaries ¹ | Yes |
| F.5 | Allowance for use of antibiotics | No |
| F.6 | Allowance for use of chemicals and synthetic fertilizers | No |
| F.7 | Allowance for use of external ² feed | No |
| F.8 | Ratio of farming area to adjacent mangrove forest area ³ | 50% / 50% |
| F.9 | Active predator control | None ⁴ |
| F.10 | Protection of endangered species ⁵ | Yes |
| F.11 | Documentation of all inputs (PL's and fertilization (F.4)), harvest / sales of shrimp | Yes |
| F.12 | Group approval for small-scale farmers ⁶ | Yes |
| F.13 | Stocking density | Natural density (< 10 PL's / m2) |
| F.14 | Genetic modified Organisms (GMO) | Use of GMO not allowed |

1 Organic fertilizers such as compost are allowed if the organic material comes from the referring farm (internal organic materials) and as long as they are applied in a controlled and well-documented manner. The application of probiotics is allowed and the ingredients 2 Definition of external: All materials not sourced from within the farm.

4 Exception: for fish allowed by natural substance (e.g. Saponine) 5 Species classified by IUCN Red List TM as endangered (EN) or critically endangered (CR) 6 See "SELVA SHRIMP® Criteria: Farm Group Approval" for reference



³ Definition of mangrove forest surface: Surface area that is covered by mangrove plants. Mangrove plants include primary forest as well as newly reforested areas.

7. Farmer Group Auditing & Internal Control Systems (ICS)

The Selva Shrimp programs is specifically designed to allow smallholder farmers and local farming communities to participate in certification programs by independent third-party audits. An important element for realizing economically viable and effective verification of larger groups of smallholder farmers is the development and operation of internal control systems and farmers group approval.

G.1. Scope of Farm Group Approval

| G.1.1 Shrimp farms eligible for group approval must follow the production practices defined in the S Farm Criteria for the relevant foodscape system and origin | |
|---|--|
| G.1.2 Group members must be in the same geographic proximity and shall have identical production syst | |
| G.1.3 Group members and/or their affiliated organization must have adequate capacities and capabilitie support an effective internal control system that ensures compliance of individual members with t Selva Shrimp Farm Criteria in an objective and transparent manner | |

G.2 Requirements for Farm Group Approval

| G.2.1 | The unit of approval shall be the farm group as a whole | |
|--------|---|--|
| G.2.2 | The farm group defines the management body for group approval, which acts as the client for approval by the external verification body | |
| G.2.3 | An effective internal control system (ICS) must be in place | |
| G.2.4 | The ICS must include a documented management structure for all relevant processes of internal control | |
| G.2.5 | The ICS must include documented biennial internal inspections of all group members for compliance with the Selva Shrimp Farm Criteria | |
| G.2.6 | 2.6 A risk assessment has been carried out, the aim of which is to identify possible threats with regard any part of the Selva Shrimp Criteria. There are procedures in place that address the identified risk measures to mitigate them. | |
| G.2.7 | 2.7 The management body of the group must obtain signed commitments and confirmation of complia from all group members to comply with the Selva Shrimp Farm Criteria and to allow for inspections defined by the ICS | |
| G.2.8 | 3.2.8 The management body of the group must ensure that all group members have access to the relevance of the relevance of the shall be adapted to the local language and understandable to the farm | |
| G.2.9. | New group members are included in the group only after having gone through the procedures defined b the ICS and after having passed both an internal and an external inspection | |
| G.2.10 | 10 There is a mechanism in place to exclude non-compliant members from the group and there is a c that identifies members as either compliant or non-compliant | |



G.2.11 The management body of the farm group must establish and implement the following requirements for farmer group approval:

- The ICS must be implemented and managed by competent personnel
- There must be a complete set of documentation for group approval, including at least the following elements:
 - Description of the ICS
 - Organizational chart including the background and responsibilities of each member of the management body
 - Maps describing the facilities of each member's farm and indicating the position of the farm within the group area
 - Complete list of all group members
 - Signed member agreements
 - · Farming records (at least stocking, harvest and any other relevant action if applicable)
 - Harvest and trade records including yield estimates
 - Inspection reports

G.3 External Verification and Approval Process

| G.3.1 | The external approval body shall require the management body of the group to sign a written contract specifying the responsibilities of the farm group and the ICS | | |
|-------|---|--|--|
| G.3.2 | An external inspection of the ICS and individual group members shall be carried out biennially | | |
| G.3.3 | The external inspection shall be carried out in the presence of at least one member of the management group and one ICS inspector | | |
| G.3.4 | During the verification process, the external approval body shall determine whether: All internal control procedures are in place, well documented and effective Internal inspections of all group members have been carried out properly and have taken place at least once a year Adequate records of inspections have been maintained by the internal control system New members have passed accordant procedures before having been included in the group Instances of non-compliance have been dealt with appropriately and according to a documented penalty system All group members understand the criteria | | |
| G.3.5 | The external verification process includes an adequate number of re-inspections of group members in | | |

order to evaluate correct application and effectiveness of the internal inspection and control system

G.4 Responsibilities and Penalties

| G.4.1 | The group as a whole (as the approval holding body) is responsible for compliance with all relevant Selva Shrimp Program criteria, including an effective penalty system |
|-------|---|

G.4.2 For cases in which non-compliance and penalties are not properly addressed by the ICS, the group shall be penalized as a whole and approval for Selva Shrimp shall be revoked.



8. Applicable Third-Party Certification Schemes

For the second level of verification, auditing, and certification (see Section 3), Blueyou approves the following aquaculture certification schemes as eligible for the Selva Shrimp program:

- Naturland Organic Aquaculture Standard
- EU Organic Aquaculture Regulation
- Aquaculture Stewardship Council (ASC)
- Fair Trade USA Seafood Program

All Selva Shrimp approved origins must be certified against one of the above-mentioned certification programs (minimal requirement).

9. Standard for Chain of Custody and Traceability

Applicability: This standard applies to all origins of Selva Shrimp and addresses the integrity of the supply chain from individual farmer's harvest, collectors, consolidation stations, transport to factories, manufacturing and packing of shrimp by licenced packers.

| | Indicator | Criteria |
|-----|-------------------------------------|--|
| C.1 | Management System of Operator | The operator must have a management system in place for effective implementation of these CoC criteria. |
| C.2 | Confirmation of Raw Material Inputs | The operator must have a system in place to assure that shrimp raw materials are received from farms with valid Selva Shrimp [®] documentation at the time of harvest. |
| | | If raw material is purchased directly from smallholders certified as a group with ICS (Internal Control System), the relevant regulation of ICS for purchasing procedures applies (e.g. AFL – approved farmer list) ¹ |
| C.3 | Record of Raw Material Inputs | The operator must maintain a record of approved shrimp raw materials received, showing the name of the suppliers, their approval numbers and evidence of the verified validity at time of shrimp harvest and raw material reception. |
| C.4 | Identification of Approved Shrimp | The operator must ensure that approved shrimp are clearly identifiable at all stages of their production including receiving, storage, processing, packaging, labeling and handling. |
| C.5 | Separation of Shrimp | Approved shrimp must be kept separate from non-approved shrimp throughout processing and manufacturing. This may be achieved by either (1) physical separation of approved and non- approved production lines or (2) temporal separation of approved and non-approved production runs. |

1 See "SELVA SHRIMP® Criteria: Farm Group Approval" for reference



| | Indicator | Criteria |
|------|-------------------------------------|--|
| C.6 | Traceability of Shrimp | The operator must have a system in place that allows the tracing of approved shrimp raw materials according to a defined unit of traceability (badge). The traceability unit refers to the (a) volume of shrimp harvested by defined group of farms / farming zones (b) on a specific day of harvest. All approved and packed final products must be labeled with an identification code that allows for products to be traced back to their unit of origin. |
| C.7 | Recall System | The operator has a system in place to recall products, which is subject to an annual mock recall test by the operator. |
| C.8 | Integrity of Manufacturing Process | Data shall be recorded to allow confirmation of the volumes of approved shrimp inputs and outputs over a specified production period. |
| C.9 | Identification of Approved Products | The operator must have a system that allows any product or batch of products sold as Selva Shrimp to be tracked to a sales invoice issued by the operator. |
| C.10 | Keeping of Records | Records shall be maintained for a minimum of three years. |

10. Licensing of Approved Packers

Shrimp processing plant operators which are manufacturing and packing Selva Shrimp must have a valid licensing agreement in place with Blueyou Consulting LTD. Blueyou Consulting is the legal owner of the Selva Shrimp trademark and underlying copyrights and is responsible for correct and consistent implementation of all standards and requirements defined in this document.

11. Adaptation of Standard and Continuous Improvement

Blueyou will regularly revise and adapt this standard document as the Selva Shrimp program grows and gains momentum. implementation of all standards and requirements defined in this document.



SELVA SHRIMP STANDARD VERSION 6.0 | JANUARY 2024