

IMPACT DIMENSION	IMPACT INDICATOR	PERFORMANCE	RATIONALE
<b>Life on Planet &amp; Natural Resources</b>			
<b>Climate Change</b>	Product Carbon Footprint (PCF)		<i>Currently being assessed</i>
<b>Biodiversity Loss</b>	Loss of biodiversity & biosphere integrity		<i>No loss of biodiversity</i>
<b>Deforestation</b>	Land use change due to deforestation		<i>No deforestation</i>
<b>Freshwater Depletion</b>	Risk for freshwater depletion		<i>No freshwater depletion</i>
<b>Eutrophication</b>	Discharge of nitrogen (N) and phosphorous (P)		<i>No N-P-inputs through feed or fertilizer</i>
<b>Toxic Compounds</b>	Pollution with toxic chemicals and pesticides		<i>No use and discharge of toxic compounds</i>
<b>People &amp; Coastal Communities</b>			
<b>Human Rights</b>	Human rights & decent work conditions		<i>Low risk for human right violation</i>
<b>Workers' Safety</b>	Exposure to health & safety hazards		<i>Low risk of unsafe working conditions</i>
<b>Community Inclusiveness</b>	Fair value chain participation by communities		<i>Family-operated corporate farm</i>
<b>Animal Welfare</b>			
<b>Living Conditions</b>	Husbandry system & rearing conditions		<i>Low density, natural environmental conditions</i>
<b>Phisical Stress</b>	Stress & injuries during rearing and harvesting		<i>Moderate risk for stress during harvesting</i>
<b>Humane Slaughter</b>	Pain & suffering during slaughter		<i>Direct transfer to ice slurry after harvesting</i>



BLUEYOU OCEAN IMPACT TRACKER

METHODOLOGY FOR ASSESSMENT AND SCORING GUIDEPOST

FARMED SEAFOOD

Version 1.0 Oct 2023

Assessment Date:	December 26, 2023
Assessor Name:	Jonas Walker
Unit of Origin Code:	A-PNV-4

Species Name	Pacific Whiteleg Shrimp ( <i>Litopenaeus vannamei</i> )
Country of Origin	Ecuador
Farming Area	Gulf of Guayaquil, Guayas Province
Origin Type	Aquaculture
Farming Method	Extensive Pond Aquaculture
Operation Type	Corporate Farm

LIFE ON PLANET & NATURAL RESOURCES

Impact Dimension	Parameter for Evaluation	Assesment Indicators and Metrics	Scoring Guidepost			Score	Comments and Remarks for Assessment
			1 Negative impact / Critical performance	2 Moderate impact / Acceptable performance	3 Positive impact / Good performance		
Climate Change Impact	LCA-based carbon footprint	Carbon Footprint in Kg CO <sub>2</sub> Eq. / kg final product on POS in market	High footprint (> 8.0 kg CO <sub>2</sub> eq./kg product at store)	Moderate footprint [3.0 - 8.0 kg CO <sub>2</sub> eq./kg product at store]	Low footprint (< 3.0 kg CO <sub>2</sub> eq./kg product at store)	0	Extensive system without any feed input. Only input during grow out is probiotics and home made fermented Bokashi fertilizer. No paddle wheels or other means of aeration used during grow out. Electricity only used at the beginning of the cycle to pump water from sea level to grow out pond ponds which are around 2-3m higher). As feed and electricity are responsible for around 80% of the total carbon footprint of an aquaculture product, origins which do not rely on feed and only to a minimal degree on electricity generally have a very low carbon footprint. The carbon footprint of this origin is currently being assessed and quantitative numbers will be available soon.
Ecosystems & Biodiversity	Biosphere integrity and biodiversity loss	Biodiversity loss, ETP impact, wildlife interaction	Critical impact on habitats, wildlife and biodiversity through farming and feed inputs	Moderate impact on biodiversity and habitats through farming and feed inputs	Low impact on nature-positive food system	3	The farm is located in former salt marshes which are encircled by a mangrove belt but is located outside and around 2-3m above the mangrove area. However, the mangroves encircling the farm serves as sedimentation trap for the water intake and biofilter. In contrast to mangrove loss, which is often correlated with the development of shrimp aquaculture in mangrove areas, in this particular case, the mangrove belt increased after the farming activity started because saline water was pumped up 2-3m above the sea level to the grow out ponds where previously no mangroves grew. Now, with the available sea water in the previously dry salt marshes, mangroves started to grow. However, no large scale mangrove reforestation is conducted as in Selva Shrimp Indonesia and Vietnam A&A areas
Deforestation	Land system change due to deforestation	Deforestation of land for agriculture or aquaculture	Critical deforestation happening / no restoration efforts	Risk for deforestation (feed crops) / no restoration	No deforestation risks / active restoration ongoing	3	The farm is located in former salt marshes located outside and around 2-3m above the mangrove area and no mangroves where cut for the construction of the farm
Freshwater Use	Depletion of freshwater	Use of freshwater and risk of depletion (feed and farming)	High consumption and critical risk for depletion	Moderate consumption / freshwater no depletion risk	No use of freshwater	3	No freshwater used. The saline water used for the nursery and grow out ponds is directly pumped from the surrounding estuary
Eutrophication	Discharge of critical nutrients (N,P)	Risk of eutrophication in feed production and aquaculture	High risk (agriculture and aquaculture)	Moderate risk	Low / No Risk	3	No feed is used during grow out. Therefore risk of eutrophication can be deemed low
Toxic Compounds	Pollution with chemicals and pesticides	Use of chemicals, pesticides, antibiotics and toxic compounds	Frequent and continuous use as part of SOP	Moderate and occasional use under GAP	No use as part of SOP	3	The only input during the grow out cycle is probiotics and fermented bokashi (used as a natural fertilizer). Both compounds are non-toxic and dont pose any threat to the environment. Other chemicals are not used.

PEOPLE & COASTAL COMMUNITIES

Human Rights & Work Conditions	Human rights and decent work conditions	Risk for human right abuse and critical work conditions	High risk	Moderate risk	Low risk	3	The total farming area is 400ha and is managed directly by the company owning the shrimp farms. The lack of small-scale farmer structures, the small total size of the area, the good accessibility, the few number of people involved in the pond management and their direct employment by the company make violations of social compliance and workers' safety very unlikely. Blueyou team members have been personally on-site to verify environmental and social compliance and did not find any non-compliance
Workers' Safety	Safe working conditions along supply chain	Risk for critical working conditions on farming and processing level	High risk	Moderate risk	Low risk	3	The operation is vertically integrated and the company manages the farming operation as well as the processing operations and all transportation in between. All people working on the farms are directly employed by the company. Blueyou team members have been personally on-site to verify social compliance and were free to interact with all employees on farm and processing level without any restrictions from the company.
Community Inclusiveness	Fair value and participation of communities	Level of involvement of local community in farming and value chain	No / Low	Moderate	High	2	The aquaculture ponds are not managed by a community of small-scale farmers but by a few employees of the owning company. While this decreases the risk of social non-compliance it also reduces the involvement of the local community. In such setups benefits generated through the farming of shrimps (other than the job creation) are usually shared to a lower degree with the local community but tend to stay within the company.

ANIMAL WELFARE

Living Conditions & Quality of Life	Husbandry system which respects natural behaviour	Husbandry systems, intensity level, natural environment	Inappropriate husbandry, High risk for overcrowding and prolonged stress	Species appropriate husbandry, moderate crowding	Natural environment, low densities	3	The living conditions for the shrimp in the respective aquaculture systems are deemed very good. This is mostly due to the very low stocking density (less than 5 PLU/m <sup>2</sup> Pond Surface), Broodstock without eyestalk ablation and the mangroves being functionally linked to the aquaculture system
Capture, Harvesting & Handling	Reducing stress during harvesting & handling	Risk of exposure to prolonged stress, pain and injuries	High risk for prolonged stress, pain and multiple injuries	Moderate exposure to stress and improved handling	Optimized handling to reduce stress to minimum	2	Low risk of stress during rearing because of low stocking density. The shrimp are harvested and directly transferred to a ice slurry. Time between harvest and transfer to ice slurry is minimal
Stunning & Humane Slaughter	Stunning before slaughtering	Vertebrate and Decapod Crustacean are stunned prior to killing	No stunning and prolonged suffering prior to death	No stunning but moderate risk for prolonged suffering	Effective stunning in place within minimal time	2	Shrimp are directly transferred to ice slurry after capture (Chill Kill). For a tropical shrimp species, this is most likely a fast and humane killing method, however, no stunning of the shrimp is conducted before the transfer to the ice slurry.