

Hong Kong Offshore LNG Terminal - Works associated with the double berth jetty at LNG Terminal

Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms

3 February 2021

Project No.: 0505354

Document details	
Document title	Hong Kong Offshore LNG Terminal - Works associated with the double berth jetty at LNG Terminal
Document subtitle	Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms
Project No.	0505354
Date	3 February 2021
Version	1
Author	RY
Client Name	Hong Kong LNG Terminal Limited

Document history

	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
	0	RC	RC	JN	29/7/2020	N/A
	1	RY	RC	JN	3/2/2021	N/A

Signature Page

3 February 2021

Hong Kong Offshore LNG Terminal - Works associated with the double berth jetty at LNG Terminal

Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms



Dr Jasmine Ng
Partner

ERM-Hong Kong, Limited
2509, 25/F One Harbourfront
18 Tak Fung Street
Hung Hom
Kowloon
Hong Kong

© Copyright 2021 by ERM Worldwide Group Ltd and/or its affiliates ("ERM").
All rights reserved. No part of this work may be reproduced or transmitted in any form,
or by any means, without the prior written permission of ERM.



**Hong Kong Offshore LNG Terminal - Works associated with the double berth
jetty at LNG Terminal
Environmental Certification Sheet
FEP-01/558/2018/A**


Reference Document/Plan

Document/ Plan to be Certified/ Verified:	Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms
Date of Report:	3 February 2021
Date received by ET:	3 February 2021
Date received by IEC:	22 February 2021

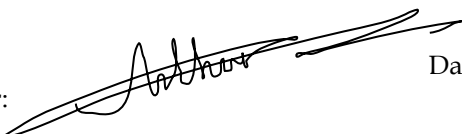
Reference EP Requirement

EP Condition:	Condition No. 2.10 of FEP-01/558/2018/A
Content:	<i>Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms</i>
The Permit Holder shall, no later than 1 month before the commencement of construction for the Project, submit 3 hard copies and 1 electronic copy of baseline study report on phytoplankton, zooplankton & benthic organisms at both the seawater intake and discharge points of the FSRU vessel to the Director for approval.	

ET Certification

I hereby certify that the above referenced document/ plan complies with the above referenced condition of FEP-01/558/2018/A.	
Mr Raymond Chow, Environmental Team Leader:	 Date: 22 February 2021

IEC Verification

I hereby verify that the above referenced document/ plan complies with the above referenced condition of FEP-01/558/2018/A.	
Mr Arthur Lo, Independent Environmental Checker:	 Date: 23 February 2021

CONTENTS

1.	INTRODUCTION	1
1.1	Background.....	1
1.2	Objectives of the Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms	1
1.3	Structure of the Report	2
2.	BASELINE STUDY METHODOLOGY	3
2.1	Phytoplankton Survey.....	3
2.1.1	Survey Locations	3
2.1.2	Survey Frequency.....	3
2.1.3	Survey Methodology	3
2.1.4	Laboratory Analyses	4
2.2	Zooplankton Survey.....	4
2.2.1	Survey Locations	4
2.2.2	Survey Frequency.....	4
2.2.3	Survey Methodology	4
2.2.4	Laboratory Analyses	5
2.3	Benthic Organism Survey	5
2.3.1	Survey Locations	5
2.3.2	Survey Frequency.....	5
2.3.3	Survey Methodology	5
2.3.4	Laboratory Analyses	6
3.	BASELINE STUDY RESULTS.....	7
3.1	Survey Programme.....	7
3.2	Phytoplankton.....	7
3.3	Zooplankton.....	9
3.4	Benthic Organisms	10
3.5	Summary	12

Annexes

Annex A	Methodology for Baseline Study on Phytoplankton, Zooplankton and Benthic Organisms
Annex B	Raw Data for Phytoplankton
Annex C	Raw Data for Zooplankton
Annex D	Raw Data for Benthic Organism

List of Tables

Table 3.1	Survey Programme for the Baseline Study.....	7
Table 3.2	Density and Species Diversity for Phytoplankton	8
Table 3.3	Dominant Phylum of Phytoplankton.....	8
Table 3.4	Density, Biomass and Species Diversity for Zooplankton	9
Table 3.5	Top Five Dominant Phylum of Zooplankton.....	10
Table 3.6	Density and Species Diversity for Benthic Organisms.....	11
Table 3.7	Top Five Dominant Phylum of Benthic Organisms in terms of Abundance.....	12

List of Figures

Figure 1.1	Indicative Location of Key Project Components
Figure 2.1	Locations for Phytoplankton, Zooplankton and Benthic Organism Surveys
Figure 3.1	Representative Photos for Phytoplankton Surveys
Figure 3.2	Representative Photos for Zooplankton Surveys
Figure 3.3	Representative Photos for Benthic Organism Surveys

1. INTRODUCTION

1.1 Background

To support the increased use of natural gas in Hong Kong from 2020 onwards, Castle Peak Power Company Limited (CAPCO) and The Hongkong Electric Co., Ltd. (HK Electric) have identified that the development of an offshore liquefied natural gas (LNG) receiving terminal in Hong Kong using Floating Storage and Regasification Unit (FSRU) technology ('the Hong Kong Offshore LNG Terminal Project') presents a viable additional gas supply option that will provide energy security through access to competitive gas supplies from world markets. The Hong Kong Offshore LNG Terminal Project will involve the construction and operation of an offshore LNG import facility to be located in the southern waters of Hong Kong, a double berth jetty, and subsea pipelines that connect to the gas receiving stations (GRS) at the Black Point Power Station (BPPS) and the Lamma Power Station (LPS).

The Environmental Impact Assessment (EIA) Report for the Hong Kong Offshore LNG Terminal Project was submitted to the Environmental Protection Department (EPD) of the Hong Kong Special Administrative Region Government in May 2018. The EIA Report (EIAO Register No. AEIAR-218/2018) was approved by EPD and the associated Environmental Permit (EP) (EP-558/2018) was issued in October 2018. An application for Further Environmental Permits (FEP) was made on 24 December 2019 to demarcate the works between the different parties. The following FEPs were issued on 17 January 2020 and the EP under EP-558/2018 was surrendered on 5 March 2020:

- the double berth jetty at LNG Terminal under the Hong Kong LNG Terminal Limited, joint venture between CAPCO and HK Electric (FEP-01/558/2018/A) ⁽¹⁾;
- the subsea gas pipeline for the BPPS and the associated GRS in the BPPS under CAPCO (FEP-03/558/2018/A) ⁽²⁾; and
- the subsea gas pipeline for the LPS and the associated GRS in the LPS under HK Electric (FEP-02/558/2018/A) ⁽³⁾.

The location plan for the works associated with the double berth jetty at LNG Terminal ('the Project') is provided in **Figure 1.1**.

1.2 Objectives of the Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms

This *Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms* for the Project has been prepared in accordance with Condition 2.10 of the Further Environmental Permit FEP-01/558/2018/A.

FEP No. FEP-01/558/2018/A, Condition 2.10:

"The Permit Holder shall, no later than 1 month before the commencement of construction for the Project, submit 3 hard copies and 1 electronic copy of baseline study report on phytoplankton, zooplankton & benthic organisms at both the seawater intake and discharge points of the FSRU vessel to the Director for approval."

- (1) Application for variation of an environmental permit for FEP-01/558/2018 was undertaken and the latest FEP (FEP-01/558/2018/A) was issued on 6 November 2020.
- (2) Application for variation of an environmental permit for FEP-03/558/2018 was undertaken and the latest FEP (FEP-03/558/2018/A) was issued on 22 January 2021.
- (3) Application for variation of an environmental permit for FEP-02/558/2018 was undertaken and the latest FEP (FEP-02/558/2018/A) was issued on 22 December 2020.

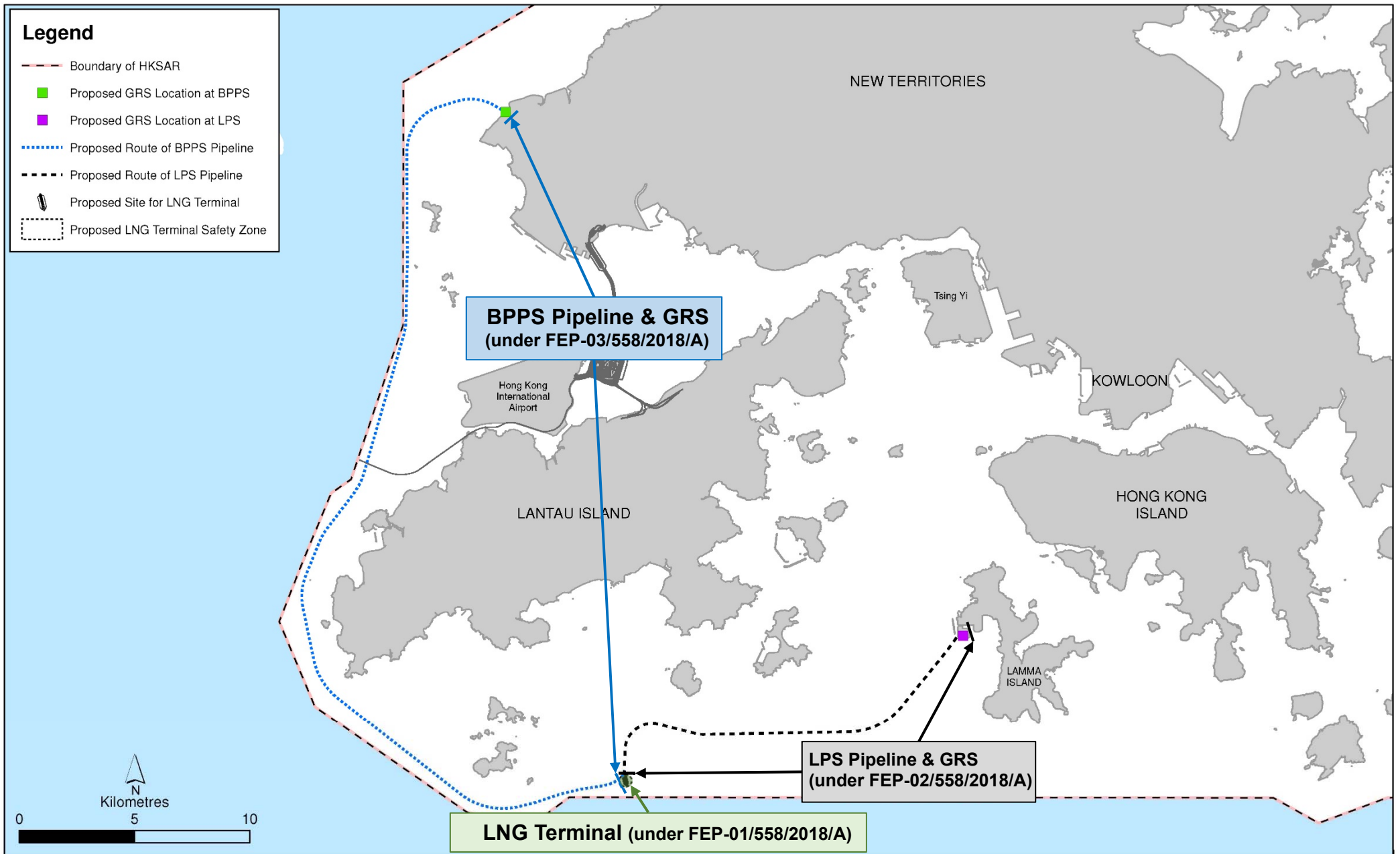


Figure 1.1

Indicative Location of Key Project Components

This report presents the results of the baseline study on phytoplankton, zooplankton and benthic organisms conducted between August 2019 and February 2020 before the commencement of construction for the Project. It should be noted that the FSRU vessel will be moored with its bow facing south at an orientation of 165°N while the seawater intake and discharge locations of the FSRU vessel will be located at ~10m below water surface near the vessel bow on port and starboard sides. This information has been considered in the planning of the survey design of the baseline study on phytoplankton, zooplankton and benthic organisms, which have been agreed with the Agriculture, Fisheries and Conservation Department (AFCD) prior to the commencement of the baseline study.

1.3 Structure of the Report

The remainder of this *Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms* is set out as follows:

- **Section 2** presents the methodology for baseline study on phytoplankton, zooplankton and benthic organisms; and
- **Section 3** presents the results of the baseline study on phytoplankton, zooplankton and benthic organisms.

2. BASELINE STUDY METHODOLOGY

The baseline study comprises phytoplankton, zooplankton and benthic organisms. The survey methodology has been agreed with AFCD prior to the commencement of the baseline study. The survey methodologies of each component are provided in *Annex A* and summarised below.

2.1 Phytoplankton Survey

2.1.1 Survey Locations

The phytoplankton surveys were conducted at three (3) locations in southern Lantau waters as presented in **Figure 2.1**. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel (Stations S1 and S2), and a reference area (Station R1). Actual survey locations were recorded using global positioning system (GPS) and water depth was measured using portable sonar system.

2.1.2 Survey Frequency

The surveys were undertaken at all locations twice in each of the wet (between April and October) and dry (between November and March) seasons during daytime (i.e. 08:00 – 16:00) prior to the commencement of the marine construction works of the Project. The survey frequency has taken into account the seasonality in phytoplankton assemblages⁽⁴⁾⁽⁵⁾, and allows replication within each season given the dynamic nature of these assemblages while maintaining the timing of sampling within a day which may influence survey results, and is thus considered to be adequate for the purpose of this survey.

2.1.3 Survey Methodology

Considering the proposed seawater intake and discharge locations of the FSRU vessel (~10 m below water surface), it is proposed to monitor both shallow (1-2 m below water surface) and deep (2-4 m above seabed) water zones for the phytoplankton survey.

The survey methodology follows published scientific literature and has also been adopted in similar studies in the region ⁽⁶⁾⁽⁷⁾⁽⁸⁾. A Van Dorn Bottle Sampler (~2 L) (Model 1920-H62, Wildco or equivalent) was used to collect phytoplankton samples at shallow and deep water zones. The sampler was firstly opened by raising both end seals, and then lowered to the proposed sampling depth; a physical messenger was sent to trigger a mechanism which closes the end seals. At each depth, three replicates of 6 L of seawater were collected. Each replicate was filtered through a 10 µm mesh to collect the phytoplankton samples and they were immediately preserved by 4% Lugol's solution or 4% borax-buffered formalin in labelled bottles after collection.

In addition to the phytoplankton sampling, other relevant data were also recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

-
- (4) Huang L, Jian W, Song X, Huang X, Liu S, Qian P, Yin K, Wu M (2004) Species diversity and distribution for phytoplankton of the Pearl River estuary during rainy and dry seasons. *Marine Pollution Bulletin*, 49:588-596.
 - (5) Chiu HMC, Hodgkiss IJ, Chan BSS (1994) Ecological studies of phytoplankton in Tai Tam Bay, Hong Kong. *Hydrobiologia*, 273:81-94
 - (6) Kraberg A, Metfies K, Stern R (2017) Sampling, Preservation and Counting of Samples I: Phytoplankton, *Marine Plankton: A Practical Guide to Ecology, Methodology, and Taxonomy*. Oxford University Press. 91-103.
 - (7) Verlençar XN (2004) *Phytoplankton Identification Manual*. National Institute of Oceanography, Dona Paula, Goa.
 - (8) Lie AAY, Wong CK, Lam JYC, Liu JH, Yung YK (2011) Changes in the nutrient ratios and phytoplankton community after declines in nutrient concentrations in a semi-enclosed bay in Hong Kong. *Marine Environmental Research* 71:178-188.

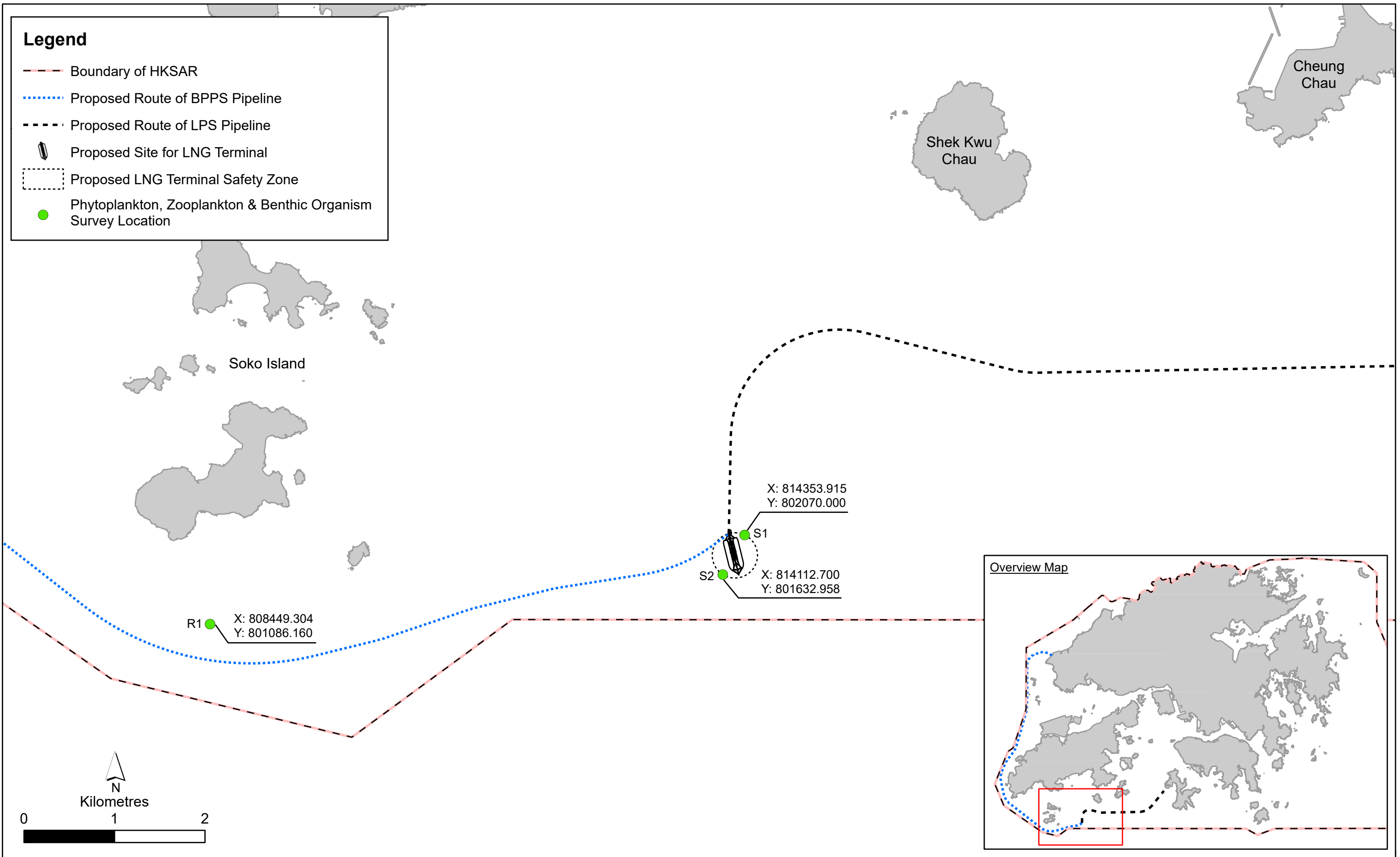


Figure 2.1

Locations for Phytoplankton, Zooplankton and Benthic Organism Surveys

2.1.4 Laboratory Analyses

The phytoplankton of each replicate was sorted and identified to the lowest taxonomic level where practical based on morphology⁽⁹⁾ and number counted under inverted microscope in the laboratory using the Utermöhl method⁽¹⁰⁾. The abundance of phytoplankton is presented in density, i.e. number of cells/ Litre.

2.2 Zooplankton Survey

2.2.1 Survey Locations

The zooplankton surveys were conducted at three (3) locations in southern Lantau waters as presented in *Figure 2.1*. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel (Stations S1 and S2), and a reference area (Station R1). Actual survey locations were recorded using GPS and water depth was measured using portable sonar system.

2.2.2 Survey Frequency

The surveys were undertaken at all locations twice in each of the wet (between April and October) and dry (between November and March) seasons during daytime (i.e. 08:00 – 16:00) prior to the commencement of the marine construction works of the Project. The survey frequency has taken into account the seasonality in zooplankton assemblages⁽¹¹⁾, and allows replication within each season given the dynamic nature of these assemblages while maintaining the timing of sampling within a day which may influence survey results, and is thus considered to be adequate for the purpose of this survey.

2.2.3 Survey Methodology

Considering the proposed seawater intake and discharge locations of the FSRU vessel (~10 m below water surface), both shallow (1-2 m below water surface) and deep (2-4 m above seabed) water zones were monitored for the zooplankton survey.

The survey methodology follows published scientific literature and has also been adopted in similar studies in the region⁽¹²⁾⁽¹³⁾⁽¹⁴⁾. A bongo plankton net of 50 cm mouth diameter and 300 µm mesh (Aquatic research Instruments, USA or equivalent) was deployed to collect zooplankton at shallow and deep water zones at each survey location. A flow meter (Model 2030R, General Oceanics Inc., USA or equivalent) was fitted at mouth of the net to record the volume of water filtered. At each depth, three replicate tows were conducted, and each tow with a duration of at least 5 minutes at a speed of ~2 knots. The zooplankton collected at the cod-end was immediately fixed in 4% borax-

-
- (9) Verlencar XN (2004) *Op Cit.*
- (10) Edler L and Elbrächter M (2010) The Utermöhl method for quantitative phytoplankton analysis. *Microscopic and Molecular Methods for Quantitative Phytoplankton Analysis*. UNESCO. 13-20.
- (11) Tan Y, Huang L, Chen Q, Huang X (2004) Seasonal variation in zooplankton composition and grazing impact on phytoplankton standing stock in the Pearl River Estuary, China. *Continental Shelf Research* 24:1949-1969.
- (12) Hwang J, Souissi S, Tseng L, Seuront L, Schmit, FG, Fang L, Peng S, Wu C, Hsiao S, Twan W, Wei T, Kumar R, Fang T, Chen Q, Wong CK (2006) A 5-year study of the influence of the northeast and southwest monsoons on copepod assemblages in the boundary coastal waters between the East China Sea and the Taiwan Strait. *Journal of Plankton Research*, 28:943-958
- (13) UNESCO (1968) Zooplankton Sampling, <<https://unesdoc.unesco.org/ark:/48223/pf0000071517>> Assessed on 1 August 2019.
- (14) Santhanam P, Pachiappan P, Begum A (2019) A Method of Collection, Preservation and Identification of Marine Zooplankton. *Basic and Applied Zooplankton Biology*. 1-44.

buffered formalin in labelled bottles after collection and then transferred into 75% ethanol for subsequent preservation in the laboratory.

In addition to the zooplankton sampling, other relevant data were also recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

2.2.4 Laboratory Analyses

The zooplankton was sorted and identified to the lowest taxonomic level where practical based on external morphology⁽¹⁵⁾. The abundance of zooplankton is reported in density, i.e. number of individuals per m³, and their biomass is reported in wet weight, i.e. wet weight per m³ according to the following procedure in the laboratory⁽¹⁶⁾.

The abundance of zooplankton was counted under microscope. Common zooplankton taxa (ie protozoans, cladocerans, copepods, decapod larvae, mysids etc.) and their species were enumerated in subsample or aliquot of 10% to 25%. The percentage of aliquot could be increased or decreased depending on the abundance of zooplankton in the sample. For rare taxa, the total counts of specimens in the samples shall be made. The biomass of zooplankton was measured by gravimetric method. Subsamples were filtered to remove the interstitial water by blotting paper and the wet weight of zooplankton was determined.

2.3 Benthic Organism Survey

2.3.1 Survey Locations

The benthic organism surveys were conducted at three (3) locations in southern Lantau waters as presented in *Figure 2.1*. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel (Stations S1 and S2), and a reference area (Station R1). Actual survey locations were recorded using global positioning system (GPS).

2.3.2 Survey Frequency

Benthic organism surveys were conducted once in each of the wet (between April and October) and dry (between November and March) seasons, prior to the commencement of the marine construction works of the Project. As indicated in the EIA study of this Project, benthic assemblages are quite homogenous in nature. The survey frequency has already taken into account the seasonality in benthic assemblages and is thus considered to be adequate for the purpose of this survey.

2.3.3 Survey Methodology

The survey methodology follows that of the EIA study of this Project. Sediment sample was collected at each survey location using a modified Van Veen grab sampler (960 cm² sampling area; 11,000 cm³ capacity) with a supporting frame attached to a swiveling hydraulic winch cable. Duplicate sediment grab samples were obtained at each survey location. The sediment samples were evaluated for acceptance based upon the degree of disturbance, penetration depth, and amount of leakage from the grab. In the following cases, a sediment sample would be rejected and another sample collected:

- The sediment sampler doors open in recovery, causing possible surface washout.

(15) Santhanam et al. (2019) Op Cit.

(16) Goswami SC (2004) Zooplankton Methodology, Collection & Identification – a field manual. National Institute of Oceanography, Dona Paula, Goz.

- Half sample obtained where the sediment sampler had not struck a flat area of seabed, or improper deployment of benthic grab, or half sample of sediment.
- Disruption of the sample by heavy shaking or contamination (these can occur when a sample is badly handled or if the sediment sampler strikes the side of the vessel during operations).
- The sample represents less than 30% of the sediment sampler's total capacity (i.e. less than 15 cm penetration).
- Grab deployment location deviates from the designated position ⁽¹⁷⁾.

Before sieving each sample on site, the grab, frame and sample containers were washed with seawater to avoid cross contamination of samples.

Sediments for biological analysis were sieved on board the survey vessel. The sediments were washed into a sieve stack (comprising 1 mm and 500 µm meshes) and gently rinsed with seawater to remove all fine materials. Following rinsing, any material remaining on the two screens was combined and carefully rinsed using a minimal volume of seawater into pre-labelled thick triple-bagged ziplock plastic bags. A 5% solution of borax-buffered formalin containing Rose Bengal in seawater was then added to the bag to ensure tissue preservation. Samples were sealed in plastic containers for transfer to the taxonomy laboratory for sorting and identification.

In addition to the sediment sampling, other relevant data were also recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

2.3.4 Laboratory Analyses

The laboratory performed sample re-screening after the samples have been held in formalin for a minimum 24 hours to ensure adequate fixation of the organisms. Individual samples were gently rinsed with fresh water into a 250 µm² sieve to remove the formalin from the sediments. Sieves were partially filled while rinsing a specific sample to maximize washing efficiency and prevent loss of material. All materials retained on the sieve were placed in a labeled plastic jar, covered with 70% ethanol, and lightly agitated to ensure complete mixing of the alcohol with sediments. Original labels were retained with the re-screened sample material.

Standard and recognized techniques were used for sorting organisms from the sediments. Small fractions of a sample were placed in a petri dish under a 10-power magnification dissecting microscope and scanned systematically with all animals and fragments removed using forceps. Each petri dish was sorted at least twice to ensure removal of all animals. Organisms representing major taxonomic groups, such as Polychaeta, Arthropoda, Mollusca and miscellaneous taxa were sorted into separate, labeled vials containing 70% ethanol.

Taxonomic identifications were performed using stereo dissecting and high-power compound microscopes to determine the species diversity and abundance of benthic organisms of each sample. These are generally to the species level except for unidentified taxa, which are identified to genus as far as practical. The careful sampling procedure employed minimizes fragmentation of organisms. If breakage of soft-bodied organisms occurred, only anterior portions of fragments would be counted, although all fragments would be retained and weighed for biomass determinations (wet weight).

(17) Concerns about positional errors must be weighed against the aims of the survey. Horizontal accuracies to within 30 metres are acceptable distance.

3. BASELINE STUDY RESULTS

3.1 Survey Programme

The baseline study for phytoplankton, zooplankton and benthic organisms was conducted between August 2019 and February 2020, covering wet and dry seasons, prior to the marine construction works of the Project as presented in **Table 3.1** below.

Table 3.1 Survey Programme for the Baseline Study

Survey	Survey Programme	Sampling Time	Weather / Sea Conditions	Water Depth (m) of the Monitoring Locations
Phytoplankton Survey	<u>Wet season:</u> 19 September 2019; 3 October 2019	10:00 – 16:00 10:00 – 16:00	Sunny / Moderate Sunny / Moderate	Location S1: ~14m Location S2: ~15m Location R1: ~15m
	<u>Dry season:</u> 18 December 2019; 12 February 2020	10:00 – 16:00 10:00 – 16:00	Sunny / Moderate Cloudy / Moderate	
Zooplankton Survey	<u>Wet season:</u> 19 September 2019; 3 October 2019	10:00 – 16:00 10:00 – 16:00	Sunny / Moderate Sunny / Moderate	
	<u>Dry season:</u> 18 December 2019; 12 February 2020	10:00 – 16:00 10:00 – 16:00	Sunny / Moderate Cloudy / Moderate	
Benthic Organism Survey	<u>Wet season:</u> 27 August 2019	10:30 – 12:00	Sunny / Moderate	
	<u>Dry season:</u> 30 December 2019	11:00 – 12:30	Cloudy / Moderate	

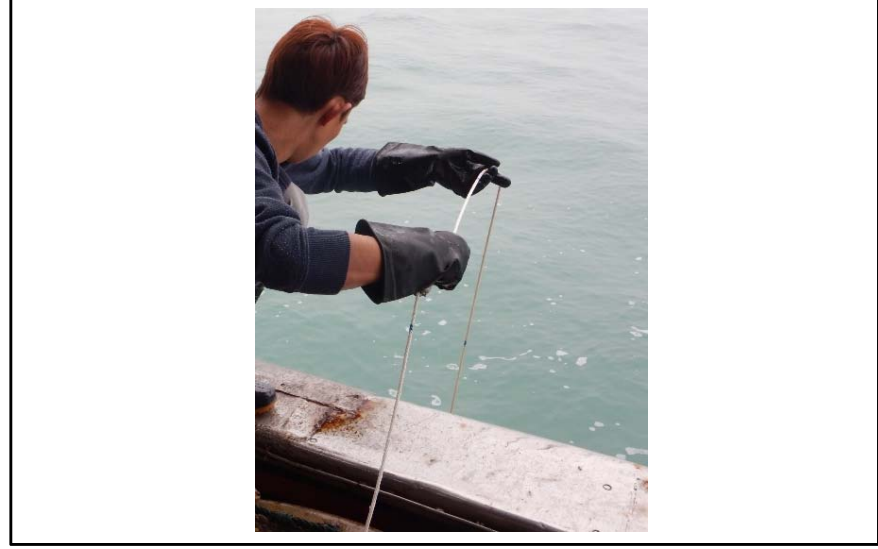
3.2 Phytoplankton

The raw data (density) of phytoplankton surveys are presented in **Annex B**. Representative photos taken during the phytoplankton surveys are presented in **Figure 3.1**. A total of 190 species, belonging to seven (7) phyla of phytoplankton, were recorded during the surveys. No rare species or species of conservation importance were recorded during the surveys. The survey results in terms of density, species diversity and evenness ⁽¹⁸⁾ are summarised in **Table 3.2**.

(18) Species diversity and evenness are expressed in terms of two indexes, Shannon Diversity (H') and Pielou's Evenness (J). The community is more diverse when the value of H' is higher. The community is more even when the value of J is higher.



a) A Van Dorn Bottle Sampler was used to collect seawater sample.



b) Collection of seawater at both shallow and deep water zones of the survey locations.



c) Seawater sample was filtered immediately using 10 μ m mesh to collect the phytoplankton samples.



d) The phytoplankton samples were preserved by 4% Lugol's solution after filtering.

Figure 3.1

Representative Photos for Phytoplankton Surveys

Table 3.2 Density and Species Diversity for Phytoplankton

Monitoring Location (Depth)	Total No. of Species ⁽¹⁾	Mean No. of Species ⁽²⁾	Mean Density (Cells / Litre) ⁽³⁾	Mean Shannon Diversity (H') ⁽⁴⁾	Mean Pielou's Evenness (J) ⁽⁴⁾
Wet Season					
S1 (Shallow)	84	28.7	45012	2.5	0.8
S1 (Deep)	94	29.3	297538	2.3	0.7
S2 (Shallow)	85	26.3	34184	2.3	0.7
S2 (Deep)	87	30.3	124478	2.3	0.7
R1 (Shallow)	69	21.5	93614	2.1	0.7
R1 (Deep)	82	27.3	135187	2.2	0.7
Dry Season					
S1 (Shallow)	89	40.7	53222	2.9	0.8
S1 (Deep)	80	32.5	22833	2.8	0.8
S2 (Shallow)	89	41.3	36000	3.0	0.8
S2 (Deep)	80	39.2	46944	2.8	0.8
R1 (Shallow)	97	46.3	44944	2.9	0.7
R1 (Deep)	80	39.3	66639	2.7	0.7

Notes:

- (1) Total no. of species is calculated by counting the individual species recorded from all the replicates collected.
- (2) Mean no. of species is calculated by averaging the number of individual species recorded from each replicate collected.
- (3) Mean density is calculated by averaging the density of phytoplankton recorded from each replicate collected.
- (4) Mean Shannon Diversity / Pielou's Evenness is calculated by averaging the indexes for each replicate collected.

The mean number of species and the mean Shannon Diversity (H') recorded were generally higher in dry season than in wet season at both shallow and deep water zones of all survey locations. The mean density of phytoplankton varied between wet and dry seasons, and the mean densities of phytoplankton were generally higher in deep water zone during wet season of the three survey locations. The dominant phylum of phytoplankton was Bacillariophyta, which contributed to >95% of the overall mean density of phytoplankton recorded in the surveys, followed by Dinophyceae, Ochrophyta, Euglenophyta, Cyanobacteria, Chlorophyta and Cryptophyta (**Table 3.3**).

Table 3.3 Dominant Phylum of Phytoplankton

Phylum	Mean Density (Cells / Litre)	
	Wet Season	Dry Season
Bacillariophyta	119927	52616
Chlorophyta	125	14
Cryptophyta	52	42
Cyanobacteria	64	139
Dinophyceae	1243	1773
Euglenophyta	153	194
Ochrophyta	105	454

3.3 Zooplankton

The raw data (density and biomass) of zooplankton surveys are presented in **Annex C**. Representative photos taken during the zooplankton surveys are presented in **Figure 3.2**. A total of 135 species, belonging to ten (10) phyla of zooplankton, were recorded during the surveys. No rare species or species of conservation importance were recorded during the surveys. The survey results in terms of density, species diversity and evenness are summarised in **Table 3.4**.

Table 3.4 Density, Biomass and Species Diversity for Zooplankton

Monitoring Location (Depth)	Total No. of Species ⁽¹⁾	Mean No. of Species ⁽²⁾	Mean Density (No. / m ³) ⁽³⁾	Mean Biomass (g/m ³) ⁽³⁾⁽⁴⁾	Mean Shannon Diversity (H') ⁽⁵⁾	Mean Pielou's Evenness (J) ⁽⁵⁾
Wet Season						
S1 (Shallow)	67	33.5	2770	0.07	2.1	0.6
S1 (Deep)	61	34.2	2299	0.14	2.3	0.6
S2 (Shallow)	59	31.3	2453	0.13	2.2	0.6
S2 (Deep)	64	33.8	2225	0.34	2.3	0.7
R1 (Shallow)	61	29.0	1788	0.14	1.9	0.6
R1 (Deep)	57	28.3	2037	0.20	2.0	0.6
Dry Season						
S1 (Shallow)	69	51.8	254	0.09	3.0	0.8
S1 (Deep)	73	37.5	545	0.11	2.5	0.7
S2 (Shallow)	68	44.5	337	0.13	2.5	0.7
S2 (Deep)	74	42.0	374	0.15	1.9	0.5
R1 (Shallow)	52	38.2	375	0.12	1.9	0.5
R1 (Deep)	77	43.3	269	0.13	2.4	0.7

Notes:

- (1) Total no. of species is calculated by counting all the individual species recorded from all the replicates collected.
- (2) Mean no. of species is calculated by averaging the number of individual species recorded from each replicate collected.
- (3) Mean density / biomass is calculated by averaging the density / biomass of zooplankton recorded from each replicate collected.
- (4) The biomass is determined by measuring the wet weight of each sample. Each sample may contain substances other than zooplankton that cannot be separated (e.g. phytoplankton and detritus).
- (5) Mean Shannon Diversity / Pielou's Evenness is calculated by averaging the indexes for each replicate collected.

The mean number of species and the mean Shannon Diversity (H') recorded were generally higher in dry season than in wet season at both shallow and deep water zones of the survey locations, and the mean number of species recorded was generally higher at locations S1 and S2. The mean density of zooplankton was higher in wet season than in dry season.

The mean density (no. per m³) of the top five dominant phyla in each season are presented in **Table 3.5**. Arthropoda (mainly contributed by Copepoda, Brachiopoda and Malacostraca) was the most abundant phylum, followed by Chaetognatha (mainly Sagittoidea), Chordata (mainly Appendicularia and Vertebrata), Mollusca (mainly Gastropoda) and Cnidaria (mainly Hydrozoa).



a) Plankton nets were used to collect zooplankton.



c) Plankton nets were deployed to collect zooplankton.



c) Plankton nets were washed after deployment at each location.



d) Zooplankton samples were filtered and fixed in 4% borax-buffered formalin.

Figure 3.2

Representative Photos for Zooplankton Surveys

Table 3.5 Top Five Dominant Phylum of Zooplankton

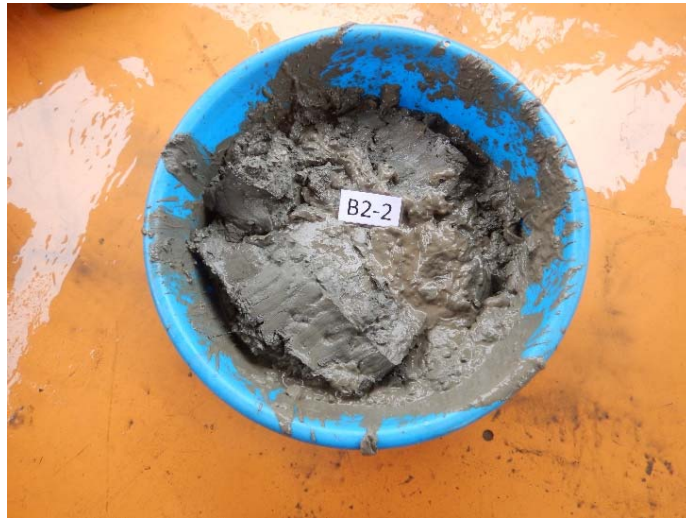
Phylum	Mean Density (No. / m ³)	
	Wet Season	Dry Season
Arthropoda	1875	166
Chaetognatha	313	80
Chordata	32	68
Mollusca	19	4
Cnidaria	12	1

3.4 Benthic Organisms

The raw data (abundance and biomass) of benthic organism surveys are presented in **Annex D**. Representative photos taken during the benthic organism surveys are presented in **Figure 3.3**. A total of 77 species, belonging to seven (7) phyla of benthos, were recorded during the surveys. No rare species or species of conservation importance (e.g. the amphioxus *Branchiostoma belcheri*) were recorded during the surveys. The survey results in terms of density, species diversity and evenness are summarised in **Table 3.6**.



a) Sediment samples were collected using a modified Van Veen grab sampler.



b) A sediment sample collected during the benthic organism survey.



c) The sediment sample was sieved on site using a sieve stack.



d) The materials remaining on the sieve screens were preserved using a 5% solution of borax-buffered formalin containing Rose Bengal in seawater

Figure 3.3

Representative Photos for Benthic Organism Surveys

Table 3.6 Density and Species Diversity for Benthic Organisms

Monitoring Location	Total Number of Infaunal Individuals ⁽¹⁾	Mean Number of Individuals per Sample ⁽²⁾	Mean Number of Individuals per m ² ⁽³⁾	Mean Taxonomic Richness (No. Families) per Sample ⁽⁴⁾	Mean Taxonomic Richness (No. Species) per Sample ⁽⁵⁾	Mean Pielou's Evenness (J) ⁽⁶⁾	Mean Shannon Diversity (H') ⁽⁶⁾	Total Biomass (g/m ² wet weight) ⁽⁷⁾	Mean Biomass per Individual (g/m ² wet weight) ⁽⁸⁾
Wet Season									
S1	97	48.5	505.21	21.0	24.0	0.94	2.98	7.06	0.07
S2	72	36.0	375.00	17.5	19.0	0.88	2.58	4.93	0.07
R1	275	137.5	1432.29	33.5	39.5	0.89	3.28	24.33	0.09
Dry Season									
S1	62	31.0	322.92	17.0	18.0	0.94	2.69	12.94	0.21
S2	41	20.5	213.54	12.5	13.5	0.94	2.45	6.38	0.16
R1	238	119.0	1239.58	33.0	37.0	0.90	3.25	141.85	0.60

Notes:

- (1) Total number of infaunal individuals is calculated by counting all the individuals recorded from all the replicates collected.
- (2) Mean number of individuals per sample is calculated by averaging the total number of infaunal individuals recorded from each replicate collected.
- (3) Mean number of individuals per m² is calculated by averaging the mean number of infaunal individuals per sample over the sampling area (i.e. 960 cm²) collected.
- (4) Mean taxonomic richness (number of families) per sample is calculated by averaging the number of families recorded from each replicate collected.
- (5) Mean taxonomic richness (number of species) per sample is calculated by averaging the number of species recorded from each replicate collected.
- (6) Mean Shannon Diversity / Pielou's Evenness is calculated by averaging the indexes for each replicate collected.
- (7) Total biomass is calculated by summation of the biomass of each replicate collected.
- (8) Mean biomass per individual is calculated by averaging the biomass per individual for each replicate collected.

The total number of infaunal individuals, the mean number of individuals (per sample / per m²), mean taxonomic richness (family and species levels), mean Shannon Diversity (H') and total biomass were higher at location R1 during both wet and dry seasons. Higher biomass was recorded at location R1 during dry season and it is mainly contributed by the mantis shrimp *Miyakella nepa*. The mean number of infaunal individuals and species diversity were generally higher in wet season than in dry season.

The mean abundance (no. per m²) of the top five dominant phyla groups in each season is presented in **Table 3.7**. Annelida was the most abundant phylum during wet and dry seasons, followed by Echinodermata / Arthropoda, Nemertea, Sipuncula / Mollusca.

Table 3.7 Top Five Dominant Phylum of Benthic Organisms in terms of Abundance

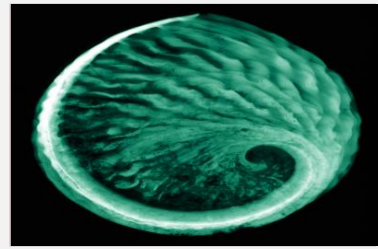
Wet Season		Dry Season	
Phylum	Mean Abundance (Number of Infaunal Individuals)	Phylum	Mean Abundance (Number of Infaunal Individuals)
Annelida	51.17	Annelida	32.83
Echinodermata	9.00	Arthropoda	9.50
Arthropoda	8.17	Echinodermata	5.67
Nemertea	3.33	Nemertea	4.00
Sipuncula	1.33	Mollusca	2.33

3.5 Summary

The baseline study for phytoplankton, zooplankton and benthic organisms was conducted between August 2019 and February 2020, covering wet and dry seasons, prior to the marine construction works of the Project to obtain information on the conditions of phytoplankton, zooplankton and benthic organisms in the vicinity of the proposed Offshore LNG Terminal (i.e. the seawater intake and discharge points of the FSRU vessel). No rare species or species of conservation importance (e.g. the amphioxus *Branchiostoma belcheri*) were recorded during the surveys.

ANNEX A

METHODOLOGY FOR BASELINE STUDY ON PHYTOPLANKTON, ZOOPLANKTON AND BENTHIC ORGANISMS



Hong Kong Offshore LNG Terminal Project

Methodology for Baseline Study on
Phytoplankton, Zooplankton and Benthic
Organisms

13 August 2019

Project No.: 0505354

Document details	
Document title	Hong Kong Offshore LNG Terminal Project
Document subtitle	Methodology for Baseline Study on Phytoplankton, Zooplankton and Benthic Organisms
Project No.	0505354
Date	13 August 2019
Version	2
Author	EL
Client Name	Castle Peak Power Company Limited

Document history

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	0	EL	RC/JN	JN	01/08/2019	N/A
Revised	1	EL	RC/JN	JN	09/08/2019	N/A
Revised	2	EL	RC/JN	JN	13/08/2019	N/A

Signature Page

13 August 2019

Hong Kong Offshore LNG Terminal Project

Methodology for Baseline Study on Phytoplankton, Zooplankton and Benthic Organisms



Dr Jasmine Ng
Partner

ERM Hong Kong
2507, 25/F One Harbourfront
18 Tak Fung Street
Hung Hom
Kowloon
Hong Kong

© Copyright 2019 by ERM Worldwide Group Ltd and / or its affiliates ("ERM").
All rights reserved. No part of this work may be reproduced or transmitted in any form,
or by any means, without the prior written permission of ERM

CONTENTS

1. METHODOLOGY FOR BASELINE STUDY ON PHYTOPLANKTON, ZOOPLANKTON AND BENTHIC ORGANISMS.....	2
1.1 Phytoplankton Survey.....	2
1.1.1 Survey Locations.....	2
1.1.2 Survey Frequency	2
1.1.3 Survey Methodology.....	2
1.1.4 Laboratory Analyses.....	3
1.2 Zooplankton Survey.....	3
1.2.1 Survey Locations.....	3
1.2.2 Survey Frequency	3
1.2.3 Survey Methodology.....	3
1.2.4 Laboratory Analyses.....	4
1.3 Benthic Organism Survey	4
1.3.1 Survey Locations.....	4
1.3.2 Survey Frequency	4
1.3.3 Survey Methodology.....	4
1.3.4 Laboratory Analyses.....	5
1.4 Proposed Survey Programme	6
1.5 Reporting	6

List of Tables

Table 1	Tentative Programme for Phytoplankton, Zooplankton and Benthic Organism Surveys
---------	---

List of Figures

Figure 1	Proposed Locations for Phytoplankton, Zooplankton and Benthic Organism Surveys
----------	--

1. METHODOLOGY FOR BASELINE STUDY ON PHYTOPLANKTON, ZOOPLANKTON AND BENTHIC ORGANISMS

This Methodology for Baseline Study on Phytoplankton, Zooplankton and Benthic Organisms presents the details of proposed baseline study on phytoplankton, zooplankton and benthic organisms for the Hong Kong Offshore LNG Terminal Project (the Project) as stipulated in Condition 2.13 of the Environmental Permit (EP-558/2018). The proposed survey methodologies for phytoplankton, zooplankton and benthic organisms are discussed below.

1.1 Phytoplankton Survey

1.1.1 Survey Locations

The phytoplankton survey will be conducted at three (3) locations in southern Lantau waters as presented in *Figure 1*. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel, and a reference area. Actual survey locations will be recorded using global positioning system (GPS) and water depth will be measured using portable sonar system.

1.1.2 Survey Frequency

The survey will be undertaken at all locations twice in each of the wet (between April and October) and dry (between November and March) seasons during daytime (ie 08:00 – 16:00) prior to the commencement of the marine construction works of the Project. The proposed survey frequency has taken into account the seasonality in phytoplankton assemblages^{(1) (2)}, and allows replication within each season given the dynamic nature of these assemblages while maintaining the timing of sampling within a day which may influence survey results, and is thus considered to be adequate for the purpose of this survey.

1.1.3 Survey Methodology

Considering the proposed seawater intake and discharge locations of the FSRU vessel (~10m below water surface), it is proposed to monitor both shallow (1-2m below water surface) and deep (~10m below water surface) water zones in the phytoplankton survey.

The survey methodology follows published scientific literature and has also been adopted in similar studies in the region^{3 4 5}. A Van Dorn Bottle Sampler (~2L) (Model 1920-H62, Wildco or equivalent; *Annex A1*) will be used to collect phytoplankton samples at shallow and deep water zones. The sampler will firstly be opened by raising both end seals, and then lowered to the proposed sampling depth; a physical messenger will be sent to trigger a mechanism which will close the end seals. At each depth, three replicates of 6L of seawater will be collected. Each replicate will be filtered through a 10µm mesh

¹ Huang L, Jian W, Song X, Huang X, Liu S, Qian P, Yin K, Wu M (2004) Species diversity and distribution for phytoplankton of the Pearl River estuary during rainy and dry seasons. *Marine Pollution Bulletin*, 49:588-596.

² Chiu HMC, Hodgkiss IJ, Chan BSS (1994) Ecological studies of phytoplankton in Tai Tam Bay, Hong Kong. *Hydrobiologia*, 273:81-94

³ Kraberg A, Metfies K, Stern R (2017) *Sampling, Preservation and Counting of Samples I: Phytoplankton, Marine Plankton: A Practical Guide to Ecology, Methodology, and Taxonomy*. Oxford University Press. 91-103.

⁴ Verlencar XN (2004) *Phytoplankton Identification Manual*. National Institute of Oceanography, Dona Paula, Goa.

⁵ Lie AAY, Wong CK, Lam JYC, Liu JH, Yung YK (2011) Changes in the nutrient ratios and phytoplankton community after declines in nutrient concentrations in a semi-enclosed bay in Hong Kong. *Marine Environmental Research* 71:178-188.

to collect the phytoplankton samples and they will be immediately preserved by 4% Lugol's solution or 4% borax-buffered formalin in labelled bottles after collection.

In addition to the phytoplankton sampling, other relevant data will also be recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

1.1.4 Laboratory Analyses

The phytoplankton of each replicate will be sorted and identified to the lowest taxonomic level where practical based on morphology⁶ and number counted under inverted microscope in the laboratory using the Utermöhl method⁷. The abundance of phytoplankton will be presented in density, i.e. number of cells/ Litre.

1.2 Zooplankton Survey

1.2.1 Survey Locations

The zooplankton survey will be conducted at three (3) locations in southern Lantau waters as presented in *Figure 1*. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel, and a reference area. Actual survey locations will be recorded using GPS and water depth will be measured using portable sonar system.

1.2.2 Survey Frequency

The survey will be undertaken at all locations twice in each of the wet (between April and October) and dry (between November and March) seasons during daytime (ie 08:00 – 16:00) prior to the commencement of the marine construction works of the Project. The proposed survey frequency has taken into account the seasonality in zooplankton assemblages⁸, and allows replication within each season given the dynamic nature of these assemblages while maintaining the timing of sampling within a day which may influence survey results, and is thus considered to be adequate for the purpose of this survey.

1.2.3 Survey Methodology

Considering the proposed seawater intake and discharge locations of the FSRU vessel (~10m below water surface), it is proposed to monitor both shallow (1-2m below water surface) and deep (~10m below water surface) water zones in the zooplankton survey.

The survey methodology follows published scientific literature and has also been adopted in similar studies in the region^{9 10 11}. A bongo plankton net of 50cm mouth diameter and 300µm mesh (Aquatic research Instruments, USA or equivalent; *Annex A2*) will be deployed to collect zooplankton at shallow and deep water zones at each survey location. A flow meter (Model 2030R, General Oceanics Inc.,

⁶ Verlencar XN (2004) *Op Cit.*

⁷ Edler L and Elbrächter M (2010) The Utermöhl method for quantitative phytoplankton analysis. *Microscopic and Molecular Methods for Quantitative Phytoplankton Analysis*. UNESCO. 13-20.

⁸ Tan Y, Huang L, Chen Q, Huang X (2004) Seasonal variation in zooplankton composition and grazing impact on phytoplankton standing stock in the Pearl River Estuary, China. *Continental Shelf Research* 24:1949-1969.

⁹ Hwang J, Souissi S, Tseng L, Seuront L, Schmit, FG, Fang L, Peng S, Wu C, Hsiao S, Twan W, Wei T, Kumar R, Fang T, Chen Q, Wong CK (2006) A 5-year study of the influence of the northeast and southwest monsoons on copepod assemblages in the boundary coastal waters between the East China Sea and the Taiwan Strait. *Journal of Plankton Research*, 28:943-958

¹⁰ UNESCO (1968) Zooplankton Sampling, <<https://unesdoc.unesco.org/ark:/48223/pf0000071517>> Assessed on 1 August 2019.

¹¹ Santhanam P, Pachiappan P, Begum A (2019) A Method of Collection, Preservation and Identification of Marine Zooplankton. *Basic and Applied Zooplankton Biology*. 1-44.

USA or equivalent; *Annex A3*) will be fitted at mouth of the net to record the volume of water filtered. At each depth, three replicate tows will be conducted, and each tow with a duration of at least 5 minutes at a speed of ~2 knots. The zooplankton collected at the cod-end will be immediately fixed in 4% borax-buffered formalin in labelled bottles after collection and then transferred into 75% ethanol for subsequent preservation in the laboratory.

In addition to the zooplankton sampling, other relevant data will also be recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

1.2.4 Laboratory Analyses

The zooplankton will be sorted and identified to the lowest taxonomic level where practical based on external morphology¹². The abundance of zooplankton will be reported in density, i.e. number of individuals per 1000m³, and their biomass will be reported in wet weight, i.e. wet weight per 1000m³ according to the following procedure in the laboratory¹³.

The abundance of zooplankton will be counted under microscope. Common zooplankton taxa (ie protozoans, cladocerans, copepods, decapod larvae, mysids etc.) and their species will be enumerated in subsample or aliquot of 10% to 25%. The percentage of aliquot can be increased or decreased depending on the abundance of zooplankton in the sample. For rare taxa, the total counts of specimens in the samples shall be made. The biomass of zooplankton will be measured by gravimetric method. Subsamples will be filtered to remove the interstitial water by blotting paper and the wet weight of zooplankton will be determined.

1.3 Benthic Organism Survey

1.3.1 Survey Locations

The benthic organism survey will be conducted at three (3) locations in southern Lantau waters as presented in *Figure 1*. These locations cover areas in the vicinity of the proposed Offshore LNG Terminal, i.e. the seawater intake and discharge points of the FSRU vessel, and a reference area. Actual survey locations will be recorded using global positioning system (GPS).

1.3.2 Survey Frequency

Benthic organism surveys will be conducted once in each of the wet (between April and October) and dry (between November and March) seasons, prior to the commencement of the marine construction works of the Project. As indicated in the EIA study of this Project, benthic assemblages are quite homogenous in nature. The proposed survey frequency has already taken into account the seasonality in benthic assemblages and is thus considered to be adequate for the purpose of this survey.

1.3.3 Survey Methodology

The survey methodology follows that of the EIA study of this Project. Sediment sample will be collected at each survey location using a modified Van Veen grab sampler (960 cm² sampling area; 11,000 cm³ capacity; *Annex A4*) with a supporting frame attached to a swiveling hydraulic winch cable. Duplicate sediment grab samples will be obtained at each survey location. The sediment samples will be evaluated for acceptance based upon the degree of disturbance, penetration depth, and amount of

¹² Santhanam et al. (2019) Op Cit.

¹³ Goswami SC (2004) Zooplankton Methodology, Collection & Identification – a field manual. National Institute of Oceanography, Dona Paula, Goz.

leakage from the grab. In the following cases, a sediment sample would be rejected and another sample collected:

- The sediment sampler doors open in recovery, causing possible surface washout.
- Half sample obtained where the sediment sampler had not struck a flat area of seabed, or improper deployment of benthic grab, or half sample of sediment.
- Disruption of the sample by heavy shaking or contamination (these can occur when a sample is badly handled or if the sediment sampler strikes the side of the vessel during operations).
- The sample represents less than 30% of the sediment sampler's total capacity (i.e. less than 15 cm penetration).
- Grab deployment location deviates from the designated position ⁽¹⁴⁾.

Before sieving each sample on site, the grab, frame and sample containers will be washed with seawater to avoid cross contamination of samples.

Sediments for biological analysis will be sieved on board the survey vessel. The sediments will be washed into a sieve stack (comprising 1 mm and 500 µm meshes) and gently rinsed with seawater to remove all fine materials. Following rinsing, any material remaining on the two screens will be combined and carefully rinsed using a minimal volume of seawater into pre-labelled thick triple-bagged ziplock plastic bags. A 5% solution of borax-buffered formalin containing Rose Bengal in seawater will then be added to the bag to ensure tissue preservation. Samples will be sealed in plastic containers for transfer to the taxonomy laboratory for sorting and identification.

In addition to the sediment sampling, other relevant data will also be recorded, including time, weather conditions, sea conditions, special phenomena (if any), and other activities undertaken around the survey areas that may influence the survey results.

1.3.4 Laboratory Analyses

The laboratory will perform sample re-screening after the samples have been held in formalin for a minimum 24 hours to ensure adequate fixation of the organisms. Individual samples will be gently rinsed with fresh water into a 250 µm² sieve to remove the formalin from the sediments. Sieves will be partially filled while rinsing a specific sample to maximize washing efficiency and prevent loss of material. All material retained on the sieve will be placed in a labeled plastic jar, covered with 70% ethanol, and lightly agitated to ensure complete mixing of the alcohol with sediments. Original labels will be retained with the re-screened sample material.

Standard and accepted techniques will be used for sorting organisms from the sediments. Small fractions of a sample will be placed in a petri dish under a 10-power magnification dissecting microscope and scanned systematically with all animals and fragments removed using forceps. Each petri dish will be sorted at least twice to ensure removal of all animals. Organisms representing major taxonomic groups, such as Polychaeta, Arthropoda, Mollusca and miscellaneous taxa will be sorted into separate, labeled vials containing 70% ethanol.

Taxonomic identifications will be performed using stereo dissecting and high-power compound microscopes to determine the species diversity and abundance of benthic organisms of each sample. These are generally to the species level except for unidentified taxa, which will be identified to genera as far as practical. The careful sampling procedure employed minimizes fragmentation of organisms. If breakage of soft-bodied organisms occurred, only anterior portions of fragments will be counted, although all fragments will be retained and weighed for biomass determinations (wet weight).

¹⁴ Concerns about positional errors must be weighed against the aims of the survey. Horizontal accuracies to within 30 metres are acceptable distance

1.4 Proposed Survey Programme

The Project is scheduled to commence construction by mid-2020. Therefore, the baseline monitoring is proposed to be conducted between 2019Q3 and 2020Q1 prior to the marine construction works of the Project.

The tentative monitoring programme is presented in Table 1. It should be noted that the baseline monitoring programme may be subject to change depending on the weather and sea conditions.

Table 1 Tentative Programme for Phytoplankton, Zooplankton and Benthic Organism Surveys

Survey	Method	Location	Survey Programme
Phytoplankton Survey	Sampling by Van Dorn Bottle Sampler	Three locations in southern Lantau waters (see <i>Figure 1</i>)	<p><u>Wet season:</u> Once in August 2019 and once in September 2019</p> <p><u>Dry season:</u> Once in December 2019 and once in January 2020</p>
Zooplankton Survey	Sampling by bongo plankton net	Three locations in southern Lantau waters (see <i>Figure 1</i>)	<p><u>Wet season:</u> Once in August 2019 and once in September 2019</p> <p><u>Dry season:</u> Once in December 2019 and once in January 2020</p>
Benthic Organism Survey	Grab Sampling	Three locations in southern Lantau waters (see <i>Figure 1</i>)	<p><u>Wet season:</u> Once in August 2019</p> <p><u>Dry season:</u> Once in December 2019</p>

1.5 Reporting

In accordance with Condition 2.13 of the Environmental Permit (EP-558/2018), the *Baseline Study Report on Phytoplankton, Zooplankton and Benthic Organisms*, which will include the details of the methodology and findings of the surveys, will be submitted to Environmental Protection Department no later than one month before commencement of marine construction work.

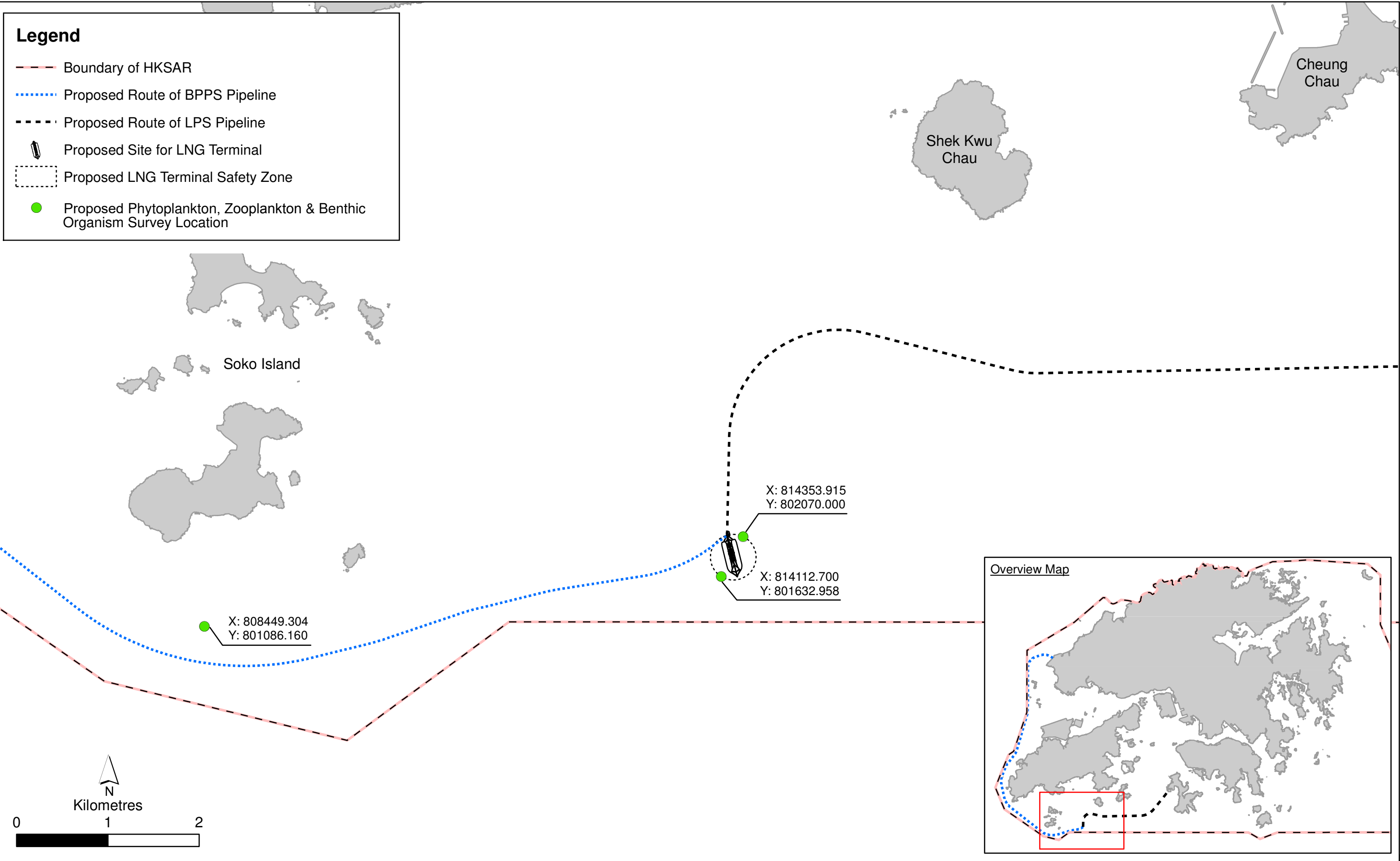


Figure 1

Proposed Locations for Phytoplankton, Zooplankton and Benthic Organism Surveys

File: T:\GIS\CONTRACT\0505354\mxd\0505354_Phytoplankton_Zooplankton_Benthic_Organism.mxd
Date: 18/7/2019

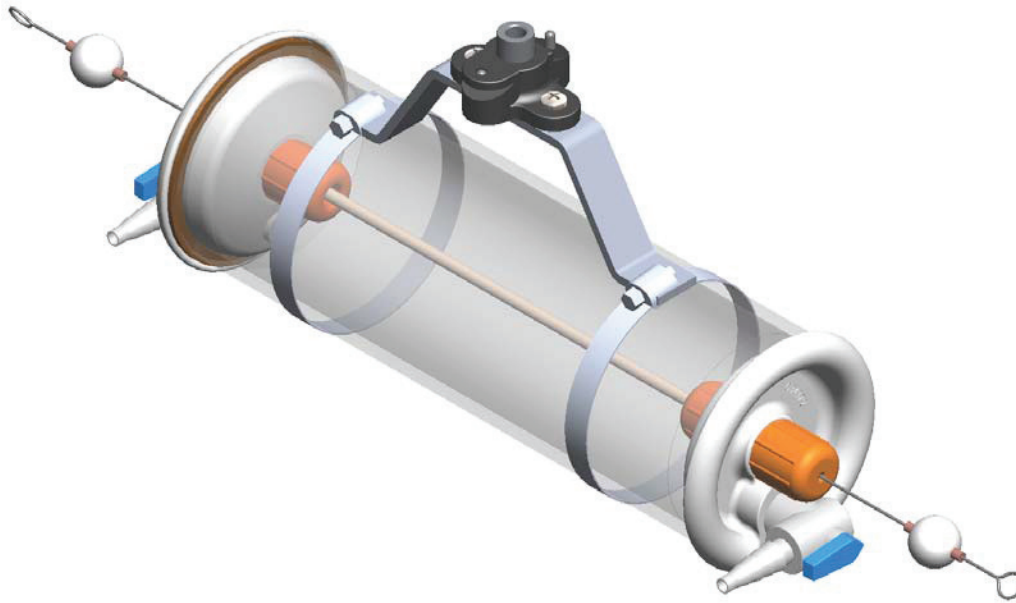
ANNEX A

DETAILS OF PROPOSED EQUIPMENT

ANNEX A1

VAN DORN BOTTLE SAMPLER

BETA BOTTLES 2.2-4.2 LITERS (1920-1940)



Kits contain Beta Bottle, polyester line, messenger, and a carry case. Bottles sold separately need an 11 ounce messenger to operate.

1920-1940 Horizontal Bottles & Kits:

Catalog #	Type	Tube diameter, length
1920-G62	2.2L Acrylic	4.5" x 13.5"
1930-G62	3.2L Acrylic	4.5" x 18.5"
1940-G62	4.2L Acrylic	4.5" x 22-5/8"
1920-H62	2.2L PVC	4.5" x 13.5"
1930-H62	3.2L PVC	4.5" x 18.5"
1940-H62	4.2L PVC	4.5" x 22-5/8"

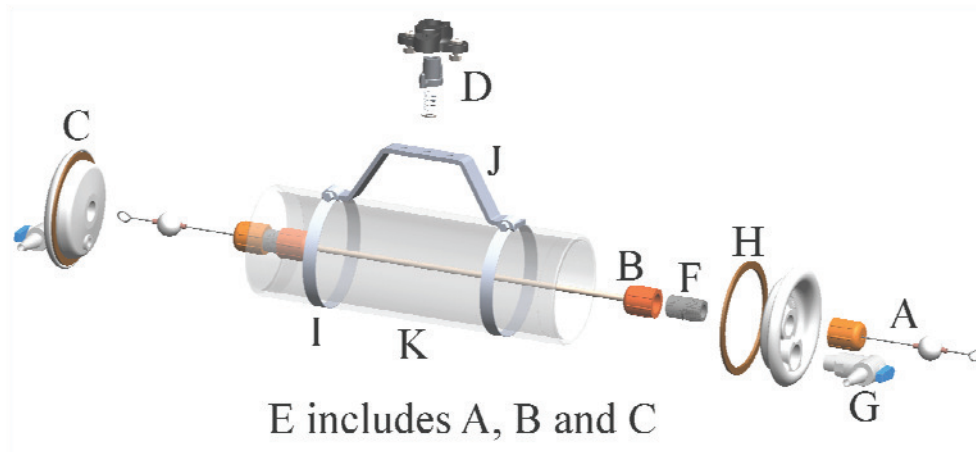
1920-1940 Vertical Bottles & Kits:

Catalog #	Type	Tube diameter, length
1920-G62	2.2L Acrylic	4.5" x 13.5"
1930-G62	3.2L Acrylic	4.5" x 18.5"
1940-G62	4.2L Acrylic	4.5" x 22-5/8"
1920-D62	2.2L PVC	4.5" x 13.5"
1930-D62	3.2L PVC	4.5" x 18.5"
1940-D62	4.2L PVC	4.5" x 22-5/8"

1920-1940 Beta Bottle Replacement Parts and Accessories:

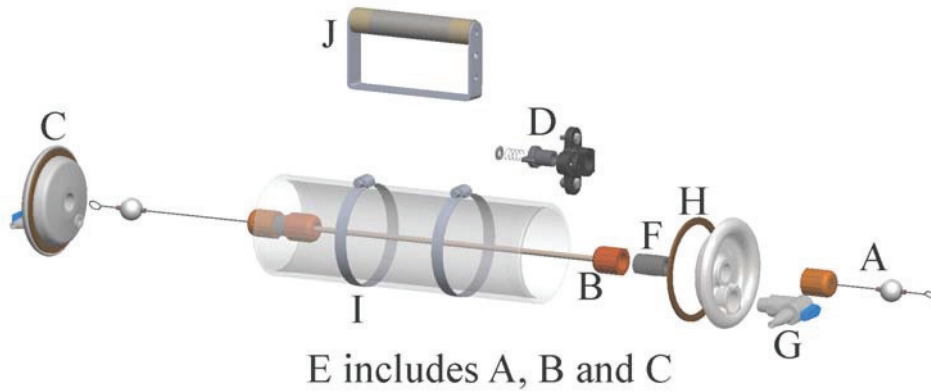
Parts are available for all bottles and are easily installed by the user. **Note:** If your bottle was purchased before the year 2000, the current parts may not work. However, we still make parts for many older bottles. Please call us for more information.

1920-1940 Horizontal Beta Bottle Replacement Parts:



	Description	2.2L part #	3.2L part #	4.2L part #
A	Cable assembly, 2 pack	1920-L127	1930-L127	1940-L127
B	Tubing Assembly	1920-L130	1930-L30	1940-L130
C	Seals with valves, 2 pack	1920-L115	1920-L115	1920-L115
D	Trip Assembly	1120-L40	1120-L40	1120-L40
E	Center assembly with cable, tubing, seals.	1920-L135	1930-L135	1940-L135
F	Connectors, 2 pack	1120-L112	1120-L112	1120-L112
G	Air/drain valves, 2 pack	1920-L112	1920-L112	1920-L112
H	Gasket Kit, 2 pack	1920-L129	1920-L129	1920-L129
I	Clamps, 2 pack	1120-L17	1120-L17	1120-L17
J	Bail (Handle)	1120-L28	1120-L28	1120-L28
K	Main Tube, Acrylic	1920-L118	1930-L118	1940-L118
K	Main Tube, PVC	1920-L120	1930-L120	1940-L120

1920-1940 Vertical Beta Bottle Replacement Parts:



	Description	2.2L part #	3.2L part #	4.2L part #
A	Cable assembly, 2 pack	1920-L125	1930-L125	1940-L125
B	Tubing Assembly	1920-L130	1930-L130	1940-L130
C	Seals with valves, 2 pack	1920-L115	1920-L115	1920-L115
D	Trip Assembly	1120-L130	1120-L130	1120-L130
E	Center assembly with cable, tubing, seals.	1920-L137	1930-L127	1940-L137
F	Connectors, 2 pack	1120-L112	1120-L112	1120-L112
G	Air, drain valves, 2 pack	1920-L112	1920-L112	1920-L112
H	Gasket kit, 2 pack	1920-L129	1920-L129	1920-L129
I	Clamps, 2 pack	1120-L17	1120-L17	1120-L17
J	Handle	1120-L122	1120-L122	1120-L122
K	Main Tube, Acrylic	1920-L118	1930-L118	1940-L118
K	Main Tube, PVC	1920-L120	1930-L120	1940-L120

ANNEX A2

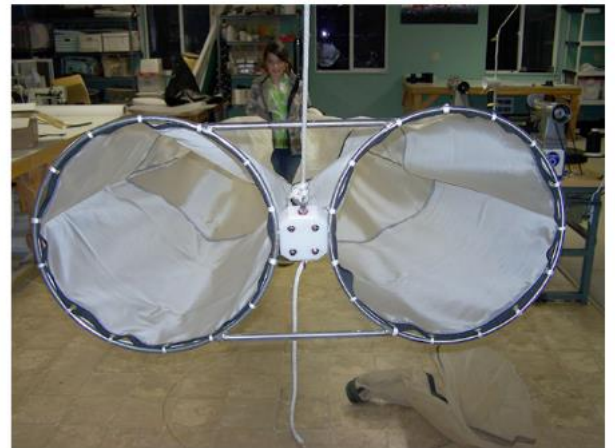
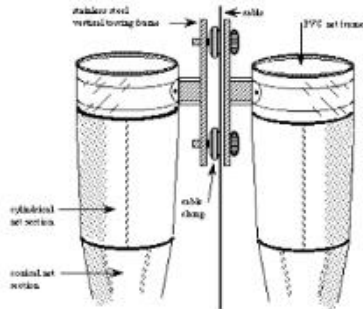
BONGO PLANKTON NET



Bongo Plankton Nets

- Ichthyoplankton and zooplankton production studies
- Oblique and vertical towing applications
- Spatially correlated plankton studies

Bongo Ring Net



Bongo "Ring" Net Frame x 50 cm Diameter

- Simple strong and ergonomic
- 50 cm diameter paired rings with triple tie bars (5/16" SS x SS316 rod stock)
- Free swiveling polyethylene towing yoke with opposing forged lifting eyes (requires scrap metal or cannonball ballast weight not included)
- Plankton nets are laced directly on frame rings
- **Complete \$700**

ANNEX A3

FLOW METER



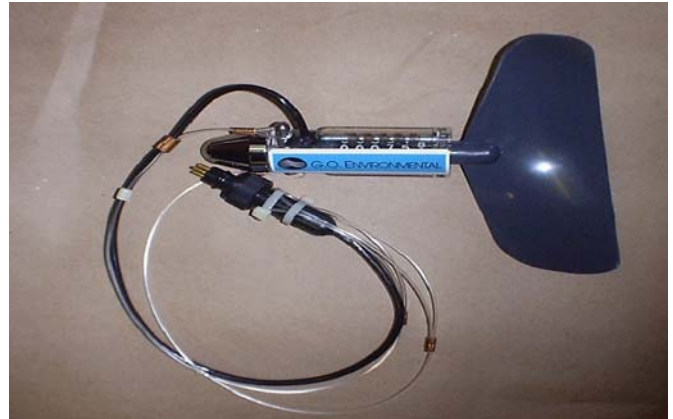
**GENERAL
OCEANICS**

1295 N.W. 163rd Street
Miami, FL 33169
(305)621-2882
www.generaloceanics.com
sales@generaloceanics.com

FLOWMETERS



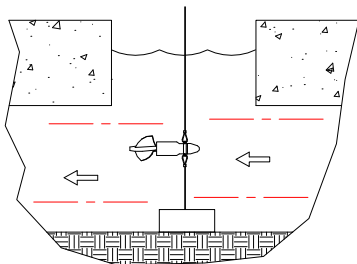
**Model 2030R Mechanical Flowmeter
With High-speed Impeller**



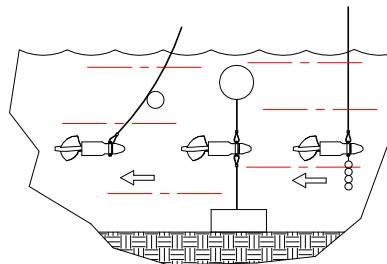
**Model 2031HR6 Electronic Flowmeter
With Low-speed Impeller**

Small and lightweight general purpose impeller instruments for use in open channel applications including rivers, estuaries, canals, sewage outfalls, pipes, harbor entrances, offshore sites and in association with plankton nets and other samplers. These flowmeters have been used as towed speed logs by some America's Cup contenders. Corrosion-free operation. Ballasted for dynamic *in situ* operation. Unlimited depth capability.

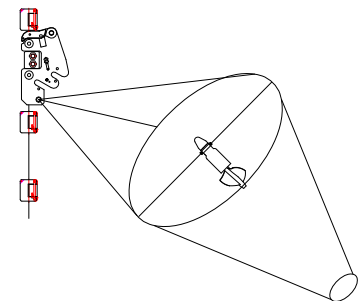
The Model 2030R is a standard flowmeter. The Model 2031H uses magnets to actuate a solid-state hall effect generator, creating a signal for processing by the readout.



Open channel use with
optional memory module



Installations in
open areas



Flowmeter mounted
in mouth of CC5100 series
plankton net system



**GENERAL
OCEANICS**

1295 N.W. 163rd Street
Miami, FL 33169
(305)621-2882
www.generaloceanics.com
sales@generaloceanics.com

Basic models, 2030 series:

2030R – Standard mechanical flowmeter
2030R6 - Low-speed impeller
2030RC – One-way clutch
2030R6C - Low-speed impeller and one-way clutch

Basic models, 2031 series:

2031H – Standard, with hall sensor & cable
2031HR6 – Low-speed impeller
2031HRC– One-way clutch
2031HR6C - Low-speed impeller and one-way clutch

SPECIFICATIONS

Data readout - Six 10-digit counter wheel reading 000000 to 999999. Ten counts per rotor revolution, non-resetting. Read by noting difference in beginning and end readings. Counter advances through 000000.

999999 counts equals approximately 14.5 nautical miles.

Speed range – With standard rotor, approx. 10cm/sec (1/5 knot) to 7.9 meters/sec (15 knots).

With low-speed rotor, approx. 6cm/sec (3/25 knot) to 100cm/sec (2 knots).

Mounting – Universal bridle allowing single-point connection for towing or two-point connection within net mouth. 3-point connection ring is also available as an option.

High-speed impeller rotates clockwise, low-speed impeller rotates counterclockwise.

Weight in air – 225 grams (8 ounces).

Weight in water – 113 grams (4 ounces).

Materials - Polycarbonate body, Celcon impeller, nickel-plated brass nose cone, Armalloyed stainless steel rotor and idler gear shafts. PVC low-speed impeller available as an option.

Dimensions - 21.3cm (8 3/8") overall length. Standard rotor diameter is 6.98cm (2 3/4"). Low-speed rotor diameter is 16.5cm (6 1/2").

Depth rating – Unlimited (free flooding).

Standard order of a 2030 series flowmeter includes universal bridle, standard or low-speed rotor.

Standard order of a 2031 series flowmeter includes universal bridle, standard or low-speed rotor and pigtail (short length of cable and underwater connector for connection to readout cable).

Readouts and other options to be ordered separately.

OPTIONS

Low-speed impeller – High resolution rotor for low-speed applications.

One-way clutch – Prohibits backward motion of rotor.

2030W – Wading rod for open-channel use.

2030CF- Spin resistance tester for monitoring performance of counter mechanism.

20307 - 7-digit counter, increases range to approx. 145 nautical miles.

2135 – Data acquisition readout, RS232 compatible.

2135D – Interface module with cable and Flow-soft application software.

2031HCXX – Extension cable, "XX" denotes length in meters.

For prices and delivery please e-mail sales@generaloceanics.com.

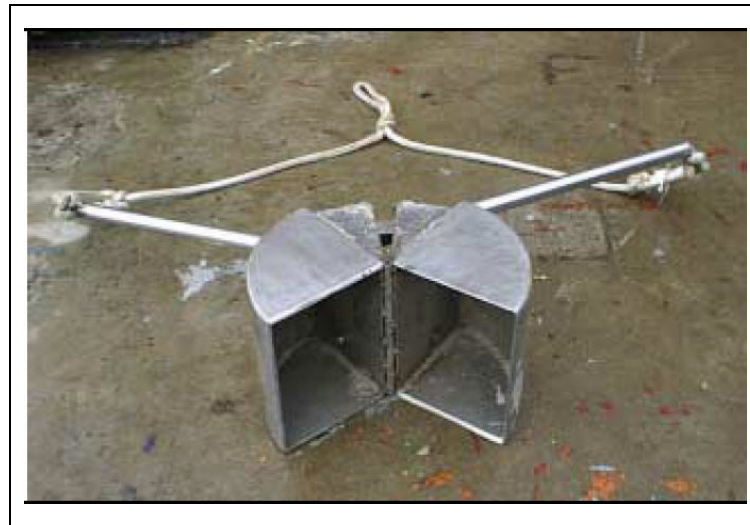
Technical data subject to change without notice.

General Oceanics, Inc., 1295 Northwest 163rd Street, Miami, FL 33169 (305) 621-2882
www.generaloceanics.com - sales@generaloceanics.com MADE IN USA SINCE 1966

ANNEX A4

VAN VEEN GRAB SAMPLER

VAN VEEN BRAB SAMPLER

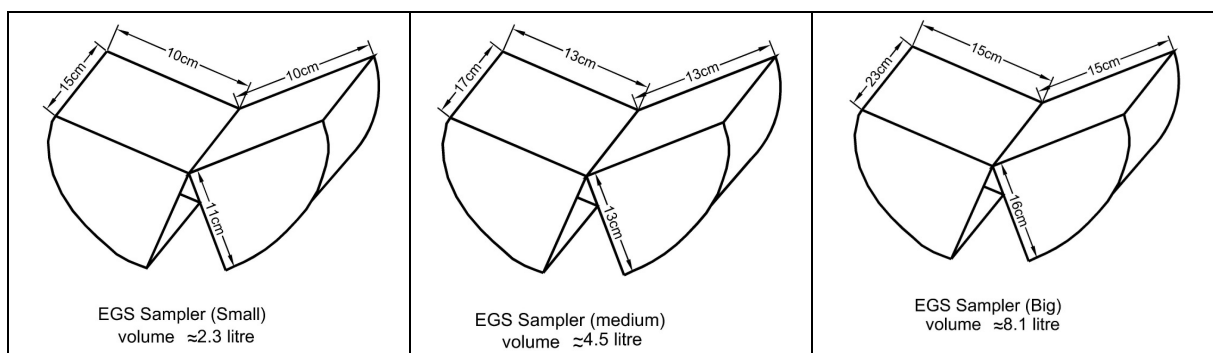


1. INTRODUCTION

The Van Veen grab is a lightweight sampler designed to take large samples in soft bottoms. Its long lever arms and the sharp cutting edges on the bottom of the scoops, enable it to cut deeply into the softer bottoms. The Van Veen grab sampler is manufactured in numerous sizes from stainless steel. The weighted jaws, chain suspension, and doors and screens allow flow-through during lowering to the bottom and assure vertical descent where strong underwater current exist. The relatively large surface area and the strong closing mechanism allow the jaws to excavate relatively undisturbed sediment. When the powering cable is slowly made taut, the chains attached at the top of the release exert great tension on the long arms extending beyond the jaws, causing them to lift, dip deeper into the sediment, and trap material as they tightly close.

2. SPECIFICATIONS

EGS has three sizes of Van Veen grab samplers as details below:



ANNEX B

RAW DATA FOR PHYTOPLANKTON

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	2206.7	0	191.7	18750.0	30918.3	28673.3
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	191.7	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	575.0	10416.7	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	3676.7	4688.3	2490.0	15278.3	13006.7	10753.3
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	1563.3	1150.0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	368.3	0	0	11285.0	7631.7	716.7
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	980.0	0	0	26041.7	701.7	716.7
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	1150.0	7638.3	2648.3	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	6945.0	0	716.7
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	538.3
30	Bacillariophyta	<i>Chaetoceros distans</i>	980.0	0	0	17188.3	1090.0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	1225.0	0	766.7	12153.3	6386.7	716.7
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	245.0	0	0	10243.3	10591.7	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	245.0	1563.3	0	4166.7	2336.7	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	245.0	0	0	0	3816.7	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	858.3	0	0	7638.3	935.0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	1150.0	10243.3	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	0	1533.3	0	0	716.7
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	735.0	0	0	0	0	180.0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	245.0	0	958.3	0	0	358.3
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	1470.0	2083.3	0	0	4595.0	180.0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	1960.0	260.0	0	12846.7	28271.7	538.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	0	1563.3	766.7	0	0	37635.0
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	0	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	0	0	180.0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	0	0	0	0	358.3
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	358.3
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	538.3
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	358.3
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	0	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	1470.0	0	0	8680.0	10201.7	1075.0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	2206.7	1041.7	0	10243.3	8800.0	0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	716.7
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	980.0	0	191.7	0	2491.7	0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	0	0	0	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	0	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	0	0	0	0	0	0
95	Bacillariophyta	<i>Paralia sulcata</i>	0	0	0	0	0	0
96	Bacillariophyta	<i>Pinnularia sp.</i>	1225.0	260.0	0	0	155.0	0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	0	0	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	0	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	0	0	0	0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	260.0	0	0	78.3	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	2083.3	0	0	281945.0	94236.7	1791.7
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	50000.0	5990.0	8046.7	0	243380.0	53763.3
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	123.3	0	0	0	0	180.0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	2083.3	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	896.7
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	521.7	383.3	5730.0	935.0	2688.3
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	735.0	0	0	5035.0	0	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	35293.3	25260.0	5555.0	307291.7	119315.0	86021.7
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	0	0	0	0	0
124	Bacillariophyta	<i>Synedra spp.</i>	368.3	0	0	1388.3	0	0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	6495.0	2605.0	2298.3	23785.0	19236.7	8065.0
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	1563.3	958.3	4513.3	16511.7	11648.3
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	1103.3	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	0	0	0	0	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	0	0	0	0	0	0
133	Bacillariophyta	<i>Thalassiosira</i> sp.	0	0	0	4688.3	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	2083.3	1301.7	575.0	6945.0	2336.7	11648.3
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum</i> f. <i>quadrangularis</i>	0	0	0	0	0	180.0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium</i> sp.	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	191.7	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	191.7	0	0	180.0
142	Dinophyceae	<i>Ceratium fuscus</i>	0	260.0	0	0	0	358.3
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	358.3
146	Dinophyceae	<i>Dinophysis caudata</i>	0	260.0	0	0	311.7	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	78.3	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium</i> spp.	0	0	0	0	0	0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	180.0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia</i> sp.	0	260.0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum</i> sp.	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	368.3	0	191.7	1041.7	311.7	180.0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	191.7	0	0	716.7
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	245.0	0	0	0	0	0
166	Dinophyceae	<i>Protoperidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoperidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoperidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoperidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoperidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoperidinium pellucidum</i>	0	0	0	0	0	180.0
172	Dinophyceae	<i>Protoperidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoperidinium</i> sp.	0	0	191.7	0	0	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	123.3	260.0	0	0	0	180.0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria</i> sp.	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella</i> sp.	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	180.0
182	Chlorophyta	<i>Pyramimonas</i> sp.	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas</i> sp.	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella</i> sp.	0	0	0	0	0	0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis</i> sp.	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	0	191.7	0	0	538.3
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	148.3	0	29761.7	1851.7	25000.0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	446.7	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	198.3	0	166.7
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	463.3	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	3030.0	446.7	666.7	15476.7	1235.0	6666.7
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	298.3	0	0	0	2000.0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	500.0	396.7	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	1833.3	0	385.0	13333.3
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	1333.3	2381.7	0	19166.7
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	1000.0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	666.7	396.7	0	500.0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	333.3	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	595.0	666.7	0	231.7	500.0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	333.3	0	848.3	3000.0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	893.3	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	463.3	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	333.3	396.7	0	666.7
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	616.7	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	991.7	0	15833.3
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	455.0	893.3	1333.3	595.0	0	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	198.3	1235.0	500.0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	303.3	298.3	0	198.3	540.0	333.3
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	166.7
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	0	0	0	198.3	1080.0	666.7
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	166.7	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	0	298.3	166.7	1190.0	6945.0	0
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	0	595.0	833.3	25793.3	2238.3	11666.7
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	0	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	0	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	0	166.7	198.3	0	166.7
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	198.3	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	198.3	231.7	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	303.3	148.3	0	1190.0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	396.7	0	166.7
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	166.7	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	793.3	0	1000.0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	0	0	666.7	793.3	848.3	666.7
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	298.3	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	606.7	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	1190.0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	0	0	0	793.3	616.7	0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	0	0	0	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	166.7	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	0	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	0	0	0	0	0	0
95	Bacillariophyta	<i>Paralia sulcata</i>	0	0	0	0	0	0
96	Bacillariophyta	<i>Pinnularia sp.</i>	0	0	0	0	0	0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	0	0	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	0	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	151.7	0	0	0	0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	833.3
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	0	2166.7	0	616.7	12500.0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	23485.0	8631.7	25333.3	159721.7	15510.0	80833.3
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	0	0	0	396.7	0	333.3
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	151.7	148.3	333.3	198.3	0	2833.3
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	0	595.0	0	666.7
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	198.3	1543.3	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	0	0	0	1698.3	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	8181.7	12053.3	7000.0	65873.3	14968.3	89166.7
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	0	0	0	0	0
124	Bacillariophyta	<i>Synedra spp.</i>	0	148.3	0	0	1583.3	0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	166.7	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	4545.0	1041.7	1833.3	396.7	3318.3	18333.3
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	908.3	1041.7	500.0	1785.0	463.3	2166.7
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	540.0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	0	0	0	0	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	0	0	0	396.7	0	0
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	333.3
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	303.3	1190.0	0	12896.7	2700.0	166.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	148.3	166.7	0	0	166.7
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	148.3	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	0	155.0	333.3
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	148.3	0	198.3	463.3	166.7
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	198.3	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	606.7	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	0	0	0	0	0	0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	148.3	0	198.3	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	148.3	0	198.3	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	198.3	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	595.0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	151.7	0	0	396.7	0	500.0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	166.7	0	0	833.3
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	166.7	198.3	0	166.7
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	166.7
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	231.7	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	0	0	0	0	0	0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	595.0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	0	0	0	198.3	0	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	151.7	148.3	0	198.3	0	166.7
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	396.7	385.0	666.7
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	148.3	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	446.7	0	198.3	0	333.3
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	198.3	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	0	0	0	0	0	0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	166.7	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	148.3	0	198.3	0	166.7
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	1166.7	10300.0	0	59140.0	10166.7	8248.3
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	163.3	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrum hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrum varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	60.0	0	255.0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	60.0	0	765.0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	666.7	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	10166.7	9363.3	2125.0	7168.3	4750.0	8758.3
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	748.3	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	1000.0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	238.3	0	3741.7
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	9363.3	0	8960.0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	1333.3	0	0	596.7	3250.0	765.0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	666.7	0	980.0	0	0	850.0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	666.7	12171.7	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	120.0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	980.0	0	1333.3	510.0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	326.7	1255.0	0	2381.7
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	980.0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	180.0	250.0	765.0
38	Bacillariophyta	<i>Chaetoceros teres</i>	1333.3	1123.3	326.7	298.3	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	358.3	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	5805.0	0	3345.0	0	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	60.0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	1075.0	250.0	170.0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	1333.3	186.7	0	120.0	2916.7	3231.7
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	0	375.0	0	1971.7	14833.3	2636.7
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	1833.3	1311.7	0	38231.7	1000.0	6718.3
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	0	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	186.7	0	0	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	186.7	0	60.0	0	0
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	186.7	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	1123.3	0	7228.3	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	163.3	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	0	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	170.0
77	Bacillariophyta	<i>Lauderia borealis</i>	666.7	0	0	120.0	4000.0	2381.7
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	666.7	0	326.7	0	1666.7	1445.0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	60.0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	0	186.7	0	60.0	0	510.0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	0	0	0	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	0	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	0	0	0	0	0	0
95	Bacillariophyta	<i>Paralia sulcata</i>	0	0	0	0	0	0
96	Bacillariophyta	<i>Pinnularia sp.</i>	0	0	0	0	0	0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	0	0	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	0	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	0	0	0	0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	5618.3	3268.3	19713.3	1500.0	1190.0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	16333.3	191011.7	97221.7	67503.3	84916.7	76955.0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	0	0	0	0	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	666.7	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	186.7	163.3	10811.7	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	500.0	1123.3	163.3	5735.0	1916.7	680.0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	186.7	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	0	0	0	583.3	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	16000.0	49625.0	16340.0	93190.0	56000.0	18793.3
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	0	0	0	0	0
124	Bacillariophyta	<i>Synedra spp.</i>	0	0	0	0	0	0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	6333.3	7490.0	8986.7	3585.0	29166.7	27721.7
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	4333.3	6555.0	326.7	358.3	3333.3	3911.7
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	255.0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	186.7	163.3	358.3	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			19/09/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	0	0	0	0	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	0	0	0	0	0	0
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	1250.0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	11236.7	4085.0	12545.0	1916.7	2721.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	60.0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	60.0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	120.0	0	0
142	Dinophyceae	<i>Ceratium fuscus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	186.7	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	120.0	250.0	255.0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	163.3	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	186.7	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	0	0	0	0	0	0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	833.3	0	0	120.0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	358.3	0	3146.7
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	0	120.0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	333.3	0	163.3	120.0	0	0
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	120.0	166.7	85.0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	60.0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	0	0	0	0	0	0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	0	0	0	120.0	0	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	166.7	186.7	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	60.0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	0	0	0	0	0	0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	186.7	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	186.7	163.3	180.0	0	0
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	166.7	0	0	0	166.7	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	166.7	0	0	0	333.3	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	166.7	0	0	0	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	333.3	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrum hyalinum</i>	0	0	0	0	166.7	0
10	Bacillariophyta	<i>Bacteriastrum varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	333.3	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	166.7	0	0	0	0	166.7
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	166.7	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	0	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	166.7	0	166.7	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	166.7	0	166.7	0	0
41	Bacillariophyta	<i>Climacodinium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	166.7
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	166.7	333.3	0	166.7	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	0	166.7	0	333.3	0	0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	333.3	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	333.3	0	0	0	166.7	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	3666.7	3000.0	3500.0	2166.7	1333.3	2833.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	0	333.3	333.3	0	0	0
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	333.3	1166.7	166.7	0	166.7	666.7
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	166.7	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	333.3	166.7	166.7	166.7	0
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	166.7	500.0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	166.7	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	0	166.7	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	166.7	166.7	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	2000.0	2000.0	3333.3	1833.3	4000.0	3333.3
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	166.7	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	166.7	333.3	166.7	166.7	166.7	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	166.7	0	0	333.3	166.7
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	166.7	0	0	0	0	0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	0	0	166.7	0	333.3
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	166.7	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	1166.7	1000.0	833.3	333.3	666.7	333.3
95	Bacillariophyta	<i>Paralia sulcata</i>	0	0	166.7	0	0	166.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	0	0	0	0	166.7	333.3
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	0	166.7	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	166.7	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	0	0	0	166.7	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	833.3	3333.3	2000.0	166.7	666.7	833.3
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	166.7	666.7	0	166.7	166.7	0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	1000.0	166.7	0	0	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	166.7	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	500.0	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	166.7	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	333.3	0	0	0	166.7	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	0	0	0	0	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	333.3	0	833.3	333.3	0	166.7
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	333.3	0	166.7	166.7	0	166.7
124	Bacillariophyta	<i>Synedra spp.</i>	1000.0	2333.3	1500.0	3333.3	3500.0	5000.0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	166.7	0	333.3
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	3166.7	833.3	3000.0	2000.0	1833.3	2833.3
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	0	0	0	166.7	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	1833.3	833.3	333.3	1166.7	333.3	1833.3
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	166.7	166.7	166.7	0	166.7	166.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	166.7	166.7	333.3	0	0	0
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	166.7	666.7	166.7	0	0	166.7
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	500.0	333.3	500.0	0	0	333.3
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	166.7	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	833.3	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	166.7	0	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	166.7	166.7	0	0	166.7
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	166.7	0	0	0
166	Dinophyceae	<i>Protoperidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoperidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoperidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoperidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoperidinium oceanicum</i>	166.7	333.3	0	0	0	0
171	Dinophyceae	<i>Protoperidinium pellucidum</i>	1166.7	500.0	333.3	166.7	333.3	166.7
172	Dinophyceae	<i>Protoperidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoperidinium sp.</i>	1000.0	166.7	500.0	0	0	166.7
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	166.7	166.7
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	166.7	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	666.7
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	166.7	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	166.7	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	166.7	0	1500.0	0	1166.7
183	Cryptophyta	<i>Cryptomonas sp.</i>	333.3	0	0	166.7	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	666.7	833.3	166.7	0	0	166.7
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	166.7	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	0	0	0	0	166.7
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	166.7	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	166.7

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	166.7	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	166.7	0	333.3	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	0	166.7	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	0	0	333.3	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	166.7	0	0	0	333.3	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	166.7	0	333.3	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	166.7	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	500.0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	166.7	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortisimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	0	333.3	166.7	0	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	166.7	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	166.7	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus wailesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	166.7	333.3	0	166.7	166.7	0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	166.7	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	500.0	333.3	0	0	166.7	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	666.7	2166.7	2666.7	1666.7	666.7	1833.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	166.7	0	0	166.7	0	0
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	833.3	833.3	666.7	333.3	666.7	666.7
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	0	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	500.0	333.3	333.3	333.3	0	166.7
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	1166.7	833.3	666.7	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	166.7	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	166.7	0	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	1833.3	9333.3	7833.3	3000.0	2166.7	1166.7
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	333.3	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	333.3	1833.3	166.7	0	500.0	166.7
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	0	333.3	0	166.7	0	166.7
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	166.7	0	0	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	0	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	333.3	500.0	1833.3	0	166.7	333.3
95	Bacillariophyta	<i>Paralia sulcata</i>	0	0	0	166.7	0	166.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	0	0	0	0	0	0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	0	0	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	0	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	0	0	0	0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	166.7	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	1666.7	2000.0	1166.7	1333.3	0	666.7
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	166.7	833.3	0	333.3	0	0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	0	333.3	166.7	0	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	500.0	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	0	0	0	0	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	500.0	666.7	333.3	166.7	166.7	333.3
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	0	166.7	0	0	166.7
124	Bacillariophyta	<i>Synedra spp.</i>	1833.3	6666.7	5333.3	3666.7	1333.3	1000.0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	333.3	0	333.3	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	2833.3	3833.3	1833.3	3000.0	1166.7	2166.7
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	166.7	0	0	0	0	166.7
132	Bacillariophyta	<i>Thalassiosira rotula</i>	166.7	1666.7	166.7	1000.0	333.3	1166.7
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	166.7	166.7	0	0	0	333.3
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	0	0	0
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	333.3	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	166.7	166.7	500.0	166.7	166.7	333.3
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	333.3	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	166.7	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	0	0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	166.7	0	0	0	0	0
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	333.3	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	500.0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	666.7	333.3	166.7	0	0	166.7
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	0	0	166.7	166.7	0	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	166.7	0	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	333.3	166.7	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	333.3	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	333.3	0	0	166.7	166.7
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	333.3	666.7	666.7	500.0	166.7	0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	166.7	0	0	0	0
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	0	166.7	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	333.3	0	0	0	166.7
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrum hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrum varians</i>	0	0	0	166.7	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	166.7
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	166.7	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	0	333.3	0	0	166.7
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	333.3	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	0	0	166.7	166.7	166.7	0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	166.7	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	166.7	0	0	166.7	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	833.3	1666.7	1500.0	2166.7	2333.3	2833.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	0	0	0	0	0	0
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	166.7	500.0	166.7	166.7	0	333.3
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	0	0	166.7
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	166.7	166.7	0	500.0	0
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	333.3	0	0	166.7
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	166.7
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	0	0	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	0	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	166.7	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	333.3	2166.7	1666.7	2000.0	3166.7	833.3
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	166.7	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	166.7	166.7	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	333.3	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	166.7	166.7	0	0	333.3	166.7
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	0	0	0	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	166.7	0	0	0	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	500.0	1000.0	1000.0	833.3	1333.3	2000.0
95	Bacillariophyta	<i>Paralia sulcata</i>	0	166.7	166.7	0	166.7	0
96	Bacillariophyta	<i>Pinnularia sp.</i>	0	0	0	166.7	166.7	0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	0	166.7	0	0	0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	0	0	0	0	0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	0	0	0	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	166.7	0	0	0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	166.7	666.7	333.3	0	500.0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	0	166.7	0	0	0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	0	0	166.7	0	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	166.7	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	0	0	166.7	0	0
119	Bacillariophyta	<i>Skeletonema costatum</i>	333.3	0	0	0	666.7	500.0
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	0	0	166.7
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	0	0	166.7	0	0
124	Bacillariophyta	<i>Synedra spp.</i>	833.3	1166.7	1833.3	4500.0	5833.3	2666.7
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	666.7	2500.0	2500.0	4166.7	3500.0	3833.3
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Wet Season					
Monitoring Date			03/10/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	0	0	0	0	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	500.0	833.3	1000.0	1833.3	1333.3	666.7
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	0	0	500.0	166.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	166.7	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	0	0	0
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	166.7	0	0	0	166.7
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	0	0	0	333.3
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	0	166.7	166.7	0	1000.0	0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	166.7
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	333.3	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	0	166.7	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	166.7	0	0	166.7	0	166.7
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	0	0	0	0
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	166.7	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	0	0	166.7	0	333.3	0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	0	166.7	0	0	0	0
174	Dinophyceae	<i>Pyrophacus horoiogenicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	166.7	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	166.7	166.7	0	0	500.0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	166.7	166.7	0	0	0	166.7
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	0	0	333.3	0	500.0	500.0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	0	0	0	0	0	0
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	166.7	0	166.7	166.7	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	166.7	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	166.7
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	166.7	166.7	0	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrum hyalinum</i>	0	166.7	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrum varians</i>	0	166.7	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	1000.0	1500.0	1500.0	833.3
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	166.7	0	0	0	333.3	833.3
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	166.7	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	500.0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	166.7	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	0	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	333.3	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	166.7	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	166.7	166.7
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	333.3	166.7	0	0	166.7	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	166.7	0	0	0	166.7
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	166.7	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	166.7
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	166.7
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	0	0	166.7	0	500.0	333.3
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	166.7	0	0	500.0	0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	833.3	1000.0	1166.7	1500.0	500.0	1500.0
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	1000.0	1500.0	666.7	666.7	333.3	1166.7
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	166.7	0	166.7	166.7	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	166.7	0	166.7
60	Bacillariophyta	<i>Ditylum brightwelli</i>	333.3	666.7	166.7	500.0	1333.3	333.3
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	166.7	166.7	166.7
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
			18/12/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	333.3	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	333.3	833.3	1000.0	500.0	1000.0	1000.0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	166.7	0	0	333.3	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	333.3	500.0	166.7	166.7	500.0	166.7
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	166.7	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	1166.7	0	0	0	333.3	666.7
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	166.7	0	333.3	166.7
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	166.7	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	166.7	333.3	166.7	0	0	1166.7
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	166.7	0	166.7	0	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	166.7	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	166.7	0	0	166.7	0	333.3
94	Bacillariophyta	<i>Nitzschia spp.</i>	2333.3	2500.0	1666.7	2000.0	2000.0	3166.7
95	Bacillariophyta	<i>Paralia sulcata</i>	0	166.7	0	333.3	0	0
96	Bacillariophyta	<i>Pinnularia sp.</i>	166.7	500.0	1000.0	1000.0	833.3	3333.3
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	0	0	0	166.7	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	166.7	500.0	500.0	1000.0	666.7	1333.3
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	1500.0	0	1166.7	1000.0	1833.3	1333.3
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	166.7	0	0	0	333.3
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	333.3	166.7	0	166.7	0	166.7
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	0	0	0	500.0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	166.7
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	333.3	0	166.7	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	666.7	500.0	333.3	666.7	0	166.7
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	0	333.3	0	166.7	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stouterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	500.0	0	166.7	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	333.3	333.3	333.3	0	166.7	166.7
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	166.7	333.3	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	500.0	0	500.0	333.3	166.7	166.7
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	166.7	833.3	1000.0	333.3	500.0
119	Bacillariophyta	<i>Skeletonema costatum</i>	333.3	500.0	333.3	666.7	166.7	500.0
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	166.7	0	0	0	166.7
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	166.7	166.7	333.3	666.7	166.7
124	Bacillariophyta	<i>Synedra spp.</i>	166.7	166.7	1333.3	1333.3	666.7	666.7
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	2000.0	2000.0	5666.7	2833.3	6666.7	3333.3
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	166.7	0	166.7	166.7	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	2000.0	1500.0	3000.0	4666.7	2333.3	2833.3
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	0	166.7	0	0
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	166.7	333.3	333.3	0	0	0
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	166.7	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	166.7	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	166.7	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	333.3	166.7	166.7	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	166.7	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	166.7	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	1500.0	2000.0	0	333.3	0	333.3
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	166.7	500.0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	166.7	666.7	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	166.7	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	500.0	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	1333.3	666.7	1500.0	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	333.3	166.7	0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	333.3	0	0	0
166	Dinophyceae	<i>Protoperidinium conicum</i>	0	166.7	0	0	0	0
167	Dinophyceae	<i>Protoperidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoperidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoperidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoperidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoperidinium pellucidum</i>	0	166.7	166.7	0	0	0
172	Dinophyceae	<i>Protoperidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoperidinium sp.</i>	0	500.0	0	0	0	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	166.7	166.7	166.7	0	0	166.7
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	166.7	166.7	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	500.0	333.3	1333.3	166.7	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	0	166.7	2000.0	0	166.7	166.7
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	166.7	0	500.0	166.7	166.7	333.3
189	Ochrophyta	<i>Heterosigma akashiwo</i>	166.7	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	166.7	166.7	166.7	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	0	166.7	166.7
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	666.7	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	333.3	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	0	0	166.7	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	666.7	500.0	0	500.0	333.3	833.3
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	166.7	166.7	166.7	333.3	333.3	166.7
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	166.7	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	166.7	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	166.7	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	166.7	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	166.7	0	0	0	166.7
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	166.7	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	0	0	0	0	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	166.7	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	166.7	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	0	0	0	0	0	166.7
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	0	666.7	0	0	166.7	333.3
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	333.3	0	166.7
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	1000.0	2166.7	833.3	1333.3	1166.7	3333.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	333.3	1166.7	500.0	500.0	833.3	833.3
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	166.7	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	0	0	0	166.7	166.7
60	Bacillariophyta	<i>Ditylum brightwelli</i>	333.3	166.7	0	500.0	333.3	500.0
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	0	500.0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	166.7	0	1166.7
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	0	0	0	166.7	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	500.0	500.0	166.7	1000.0	333.3	166.7
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	166.7	166.7	166.7	666.7	333.3	666.7
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	500.0	0	166.7	0	500.0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	166.7	0	166.7	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	0	166.7	0	0	0	166.7
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	333.3	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	166.7	333.3	166.7	166.7	333.3	0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	166.7	0	0	666.7	166.7	333.3
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	166.7	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	0	0	0	166.7	166.7	666.7
94	Bacillariophyta	<i>Nitzschia spp.</i>	1666.7	2333.3	2500.0	2833.3	2333.3	3000.0
95	Bacillariophyta	<i>Paralia sulcata</i>	166.7	166.7	333.3	500.0	166.7	166.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	666.7	1000.0	833.3	1000.0	833.3	1333.3
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	166.7	0	166.7	166.7	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	333.3	1000.0	333.3	1333.3	833.3	333.3
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	0	333.3	333.3	666.7	1000.0	833.3
100	Bacillariophyta	<i>Pleurosigma formosum</i>	166.7	166.7	0	0	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	500.0	0	333.3	166.7	166.7	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	500.0	166.7	0	500.0	500.0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	166.7	500.0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	0	166.7	0	0	333.3
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	333.3	0	166.7	0	0	166.7
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	166.7	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	166.7	333.3	166.7	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	166.7	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	166.7	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	0	166.7	500.0	333.3	166.7	500.0
119	Bacillariophyta	<i>Skeletonema costatum</i>	0	166.7	333.3	1166.7	333.3	500.0
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	666.7	0	166.7	0	0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	333.3	833.3	166.7	0	166.7	333.3
124	Bacillariophyta	<i>Synedra spp.</i>	0	166.7	166.7	500.0	1333.3	666.7
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	500.0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	833.3	1000.0	2333.3	6000.0	4000.0	6166.7
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	166.7	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	0	166.7	0	0	0	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	833.3	1500.0	2833.3	2666.7	3833.3	1666.7
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	0	666.7	166.7	500.0
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	166.7	0
138	Dinophyceae	<i>Alexandrium catenella</i>	166.7	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	166.7	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	166.7	333.3	500.0	0	0	0
142	Dinophyceae	<i>Ceratium fuscus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	166.7	166.7	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	166.7	333.3	333.3	0	166.7	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	166.7	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	166.7
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	166.7	333.3	166.7	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	833.3	1500.0	1166.7	0	666.7	1500.0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	166.7
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	166.7	166.7	0	166.7	0	333.3
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	166.7	0	0	166.7	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	166.7	0	166.7	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	166.7	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	833.3	1500.0	2333.3	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	1000.0	166.7	333.3	166.7	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	166.7	0	0	0
166	Dinophyceae	<i>Protoperidinium conicum</i>	0	0	166.7	0	0	0
167	Dinophyceae	<i>Protoperidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoperidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoperidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoperidinium oceanicum</i>	0	166.7	0	0	0	0
171	Dinophyceae	<i>Protoperidinium pellucidum</i>	0	166.7	500.0	0	0	0
172	Dinophyceae	<i>Protoperidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoperidinium sp.</i>	0	333.3	0	0	166.7	166.7
174	Dinophyceae	<i>Pyrophacus horioigicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	333.3	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	666.7	666.7	333.3	166.7	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	1166.7	500.0	166.7	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	166.7	166.7	333.3	0	0	0
184	Cryptophyta	<i>Plagioselmis prolonga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	166.7	500.0	0	1166.7	166.7	166.7
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyochoa fibula</i>	166.7	166.7	500.0	166.7	500.0	666.7
189	Ochrophyta	<i>Heterosigma akashiwo</i>	166.7	0	0	166.7	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	500.0	166.7	166.7	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	500.0	166.7	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	0	0	0	166.7
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	666.7	1166.7	833.3	166.7	0	166.7
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	666.7	666.7	333.3	333.3	500.0	500.0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	0	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	166.7	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	166.7	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	166.7	0	0	0	0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	166.7	333.3	166.7	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	166.7	333.3	333.3	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	166.7	0	333.3	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	166.7	0	0	0	0	166.7
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	166.7	0	166.7	166.7	500.0	333.3
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	1500.0	0	333.3	0	500.0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	666.7	1833.3	666.7	1500.0	1000.0	1000.0
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	166.7	666.7	500.0	500.0	500.0	500.0
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	333.3	0	166.7	333.3
59	Bacillariophyta	<i>Diploneis bombus</i>	0	333.3	166.7	0	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	1000.0	1333.3	1166.7	666.7	833.3	1500.0
61	Bacillariophyta	<i>Ditylum sol</i>	166.7	0	0	0	0	333.3
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	333.3	166.7	333.3	166.7	0	166.7
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			18/12/2019					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	166.7	0	0	0	166.7	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	166.7	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	166.7	0	166.7	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	333.3	166.7	500.0	0	500.0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	333.3	666.7	166.7	500.0	333.3	500.0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	166.7	166.7	166.7	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	166.7	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	166.7	0	1000.0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	500.0	0	0	333.3	500.0	0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	0	0	0	0	0	166.7
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	166.7	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	333.3	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	500.0	166.7	333.3	166.7	166.7	500.0
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	1000.0	500.0	166.7	166.7	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	166.7	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	166.7	333.3	666.7	833.3	0	166.7
94	Bacillariophyta	<i>Nitzschia spp.</i>	3166.7	3833.3	3500.0	3666.7	1333.3	5500.0
95	Bacillariophyta	<i>Paralia sulcata</i>	500.0	1000.0	0	0	166.7	500.0
96	Bacillariophyta	<i>Pinnularia sp.</i>	1833.3	2000.0	1000.0	666.7	1000.0	1500.0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	333.3	0	333.3	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	1000.0	333.3	666.7	833.3	500.0	0
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	1166.7	1666.7	666.7	1333.3	666.7	833.3
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	333.3	0	0	333.3
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	166.7	333.3	500.0	166.7	0	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	166.7	0	666.7	0	500.0	0
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	166.7	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	333.3	166.7	666.7	333.3	500.0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	166.7	0	333.3	0	0	0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stouterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	166.7	0	333.3	0	0	333.3
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	166.7	166.7	166.7	166.7	166.7	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	166.7	0	0	0	0	333.3
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	333.3	333.3	333.3	333.3	333.3	833.3
119	Bacillariophyta	<i>Skeletonema costatum</i>	166.7	500.0	333.3	333.3	666.7	833.3
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	0	0	0	166.7	0	333.3
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	333.3	833.3	1000.0	666.7	166.7	333.3
124	Bacillariophyta	<i>Synedra spp.</i>	1666.7	1000.0	2333.3	2000.0	833.3	1500.0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	0	0	0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	6833.3	8166.7	6833.3	6333.3	3500.0	4500.0
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

		Dry Season						
		Monitoring Date	18/12/2019					
		Monitoring Location	R1					
		Monitoring Depth	Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	166.7	166.7	0	166.7	0	166.7
132	Bacillariophyta	<i>Thalassiosira rotula</i>	5833.3	4500.0	7333.3	2833.3	3500.0	4666.7
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	166.7	0	166.7	166.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	166.7	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	333.3	0	500.0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	333.3	0	333.3	0	0	0
142	Dinophyceae	<i>Ceratium fuscus</i>	0	166.7	166.7	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	166.7	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	0	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	166.7	166.7	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	1000.0	500.0	1666.7	0	666.7	666.7
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	166.7	0	0	333.3
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	0	0	0	333.3	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	166.7	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	333.3
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	500.0	500.0	166.7	0	666.7	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	0	0	166.7	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	0	0	0	0
166	Dinophyceae	<i>Protoberidinium conicum</i>	166.7	166.7	166.7	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	166.7	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	333.3	0	0	0	500.0	500.0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	0	0	0	0	0	166.7
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	333.3	166.7	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	166.7	0	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	166.7	0	0	0	166.7
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	166.7	0	0	0	0	333.3
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	166.7	166.7	0	0	0	333.3
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyochoa fibula</i>	166.7	333.3	333.3	0	333.3	666.7
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	0	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora</i> spp.	0	0	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	0	0	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis</i> sp.	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrum hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrum varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	166.7	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	0	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica</i> (Cleve)	166.7	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens</i> f. <i>decipiens</i>	0	0	0	0	0	0
27	Bacillariophyta	<i>Chaetoceros decipiens</i> f. <i>singularis</i>	0	0	0	0	166.7	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros</i> spp.	0	0	0	0	0	500.0
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	166.7	0	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	166.7	0	0	0	0	0
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus</i> sp.	166.7	0	166.7	333.3	166.7	0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	166.7	333.3	666.7	333.3	500.0	333.3
53	Bacillariophyta	<i>Coscinodiscus subtilis</i> var. <i>minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella</i> spp.	1500.0	500.0	2000.0	333.3	1333.3	1833.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	500.0	1166.7	3166.7	166.7	333.3	666.7
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	333.3	166.7	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	166.7	166.7	0	166.7	0	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	0	0	166.7	166.7	0
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia</i> sp.	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	0	0	0	333.3	166.7
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	166.7	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	0	0	333.3	166.7	0	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	0	0	0	1166.7
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	166.7	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	0	0	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	166.7	0	666.7	0	0	1000.0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	500.0	166.7	333.3	166.7	333.3	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	333.3	166.7	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	0	833.3	1500.0	1166.7	666.7	166.7
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	0	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	333.3	833.3	333.3	333.3	0	833.3
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	166.7	0	0	0	166.7	666.7
94	Bacillariophyta	<i>Nitzschia spp.</i>	4833.3	10000.0	17666.7	10500.0	1666.7	17666.7
95	Bacillariophyta	<i>Paralia sulcata</i>	166.7	333.3	166.7	166.7	0	166.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	500.0	500.0	500.0	666.7	500.0	333.3
97	Bacillariophyta	<i>Planktoniella blanda</i>	166.7	166.7	166.7	0	166.7	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	6000.0	11833.3	10000.0	12833.3	18666.7	4333.3
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	833.3	1666.7	1500.0	666.7	333.3	1500.0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	333.3	0	166.7	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	166.7	333.3	833.3	166.7	666.7	833.3
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	0	333.3	1000.0	666.7	500.0	666.7
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	0	0	166.7	0	500.0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	833.3	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	166.7	0	0	0	166.7	0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	166.7	833.3	166.7	166.7	833.3	3000.0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	166.7	0	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	2833.3	3666.7	13500.0	15333.3	35166.7	10166.7
119	Bacillariophyta	<i>Skeletonema costatum</i>	666.7	166.7	166.7	333.3	333.3	0
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	2333.3	10000.0	24000.0	21666.7	28666.7	36500.0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	1000.0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	333.3	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	500.0	0	333.3	0	166.7	333.3
124	Bacillariophyta	<i>Synedra spp.</i>	1000.0	1666.7	1333.3	166.7	833.3	500.0
125	Bacillariophyta	<i>Synedra tabulata</i>	0	166.7	333.3	0	333.3	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	5666.7	13833.3	6833.3	18000.0	0	5833.3
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	166.7	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	166.7	333.3	166.7	166.7	333.3	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	9666.7	23166.7	25333.3	26000.0	69166.7	52000.0
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	333.3	166.7	0	0	333.3
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	166.7	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	166.7	0	0	0	0
142	Dinophyceae	<i>Ceratium fuscus</i>	166.7	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	333.3	0	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	166.7	333.3	166.7	166.7	166.7	333.3
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	333.3	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	166.7	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	166.7	0	166.7	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	333.3	166.7	0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	0	0	0	0
166	Dinophyceae	<i>Protoperidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoperidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoperidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoperidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoperidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoperidinium pellucidum</i>	0	166.7	0	0	166.7	0
172	Dinophyceae	<i>Protoperidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoperidinium sp.</i>	166.7	0	0	166.7	0	333.3
174	Dinophyceae	<i>Pyrophacus horoiogenicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	166.7	0	0	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	166.7	0	0	0	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	333.3	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	166.7	0	0	0	166.7	0
186	Ochrophyta	<i>Chattonella marina</i>	0	0	0	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyochoa fibula</i>	166.7	166.7	333.3	166.7	333.3	166.7
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	500.0	333.3	166.7	166.7	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	0	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	0	0	333.3	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	166.7	166.7	0	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	0	0	0
6	Bacillariophyta	<i>Asterionellopsis kariana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	0	0	1000.0	0	1166.7
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	0	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	166.7	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	0	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	166.7	0	0	0	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	0	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	0
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	166.7	0	166.7
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	166.7	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	0	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	0	0	0	0	166.7
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	166.7	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	166.7	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	166.7	166.7	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	0	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	166.7	166.7	0	166.7	166.7	166.7
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	333.3	166.7	166.7	500.0	166.7	500.0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	333.3	1166.7	666.7	833.3	333.3	333.3
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	2166.7	1333.3	833.3	833.3	2000.0	2333.3
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	500.0	666.7	166.7	333.3	1166.7	1166.7
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	0	0	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	0	166.7	166.7	0	166.7	333.3
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	0	166.7	0	333.3	333.3
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	0	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	0	333.3	166.7	333.3	166.7	0
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	0
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	0	0	0	0	166.7

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	0	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	166.7	0	0	0	0
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	0	0
70	Bacillariophyta	<i>Guinardia striata</i>	166.7	0	0	333.3	166.7	0
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	0	0	333.3	0	0	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	166.7
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	0	0	0	0	333.3	166.7
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	166.7	0	166.7	0	0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	0	0	0	0	0	0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	500.0	166.7	666.7	333.3	500.0	0
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	0	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	166.7
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	1333.3	833.3	500.0	833.3	0	333.3
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	0	0	0	166.7	0	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	166.7	166.7	166.7	500.0	333.3	0
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	500.0	500.0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	166.7	0	0	333.3	166.7	166.7
94	Bacillariophyta	<i>Nitzschia spp.</i>	2666.7	1166.7	2333.3	6166.7	4833.3	4500.0
95	Bacillariophyta	<i>Paralia sulcata</i>	166.7	500.0	500.0	0	0	166.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	833.3	833.3	1500.0	1500.0	500.0	1000.0
97	Bacillariophyta	<i>Planktoniella blanda</i>	0	500.0	0	166.7	0	0
98	Bacillariophyta	<i>Pleurosigma acutum</i>	4666.7	2833.3	2166.7	7000.0	2000.0	2333.3
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	666.7	1166.7	833.3	1333.3	1166.7	666.7
100	Bacillariophyta	<i>Pleurosigma formosum</i>	0	0	0	166.7	166.7	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	0	1166.7	0	166.7	666.7	0
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	333.3	166.7	166.7	1333.3	166.7	666.7
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	333.3	500.0	0	500.0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	166.7	166.7	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	666.7	333.3	166.7	0	166.7
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	666.7	333.3	1333.3	0	500.0	166.7
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	0
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stolterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	0	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	0	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	1000.0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	5166.7	5833.3	3833.3	11500.0	7333.3	6000.0
119	Bacillariophyta	<i>Skeletonema costatum</i>	0	0	0	0	166.7	333.3
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	5000.0	2666.7	1333.3	9333.3	10333.3	5500.0
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	0	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	333.3	333.3	166.7	0	166.7	333.3
124	Bacillariophyta	<i>Synedra spp.</i>	1666.7	2666.7	1000.0	1500.0	3333.3	3000.0
125	Bacillariophyta	<i>Synedra tabulata</i>	166.7	0	333.3	500.0	0	0
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	13000.0	12500.0	10166.7	7333.3	7000.0	10666.7
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	0	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			S2					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	166.7	166.7	166.7	500.0	0	333.3
132	Bacillariophyta	<i>Thalassiosira rotula</i>	13666.7	9666.7	8166.7	19666.7	14500.0	14500.0
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	166.7	333.3	333.3	166.7
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	166.7	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	0	0	0
142	Dinophyceae	<i>Ceratium fuscus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	0
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	166.7	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	333.3	333.3	0	166.7	0	166.7
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	166.7	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	0	166.7	0	0	0	0
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	166.7	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	0	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	166.7	0	0	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	0	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	0	0	166.7
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	0	0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	0	0	0	166.7
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	0	0	0	0
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	0	166.7	166.7	0	0	0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	666.7	166.7	166.7	0	166.7	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	0	0	166.7
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	0	0	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	0	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	333.3	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	166.7	0
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	0	166.7	0	333.3	0	166.7
186	Ochrophyta	<i>Chattonella marina</i>	0	0	166.7	0	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	166.7	833.3	333.3	166.7	166.7	0
189	Ochrophyta	<i>Heterosigma akashiwo</i>	0	500.0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	0	500.0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Bacillariophyta	<i>Actinocyclus octonarius</i>	0	0	166.7	0	0	0
2	Bacillariophyta	<i>Actinoptychus senarius</i>	0	166.7	166.7	333.3	0	0
3	Bacillariophyta	<i>Amphora commutata</i>	0	0	0	0	0	0
4	Bacillariophyta	<i>Amphora spp.</i>	0	0	166.7	0	0	0
5	Bacillariophyta	<i>Asterionellopsis glacialis</i>	0	0	0	0	0	0
6	Bacillariophyta	<i>Asterionellopsis karitana</i>	0	0	0	0	0	0
7	Bacillariophyta	<i>Asterionellopsis sp.</i>	0	0	0	0	0	0
8	Bacillariophyta	<i>Bacillaria paradoxa</i>	0	333.3	0	0	0	0
9	Bacillariophyta	<i>Bacteriastrium hyalinum</i>	0	0	0	0	0	0
10	Bacillariophyta	<i>Bacteriastrium varians</i>	0	0	166.7	0	0	0
11	Bacillariophyta	<i>Bellerochea orologicalis</i>	0	0	0	0	0	0
12	Bacillariophyta	<i>Biddulphia mobilensis</i>	0	0	0	0	0	0
13	Bacillariophyta	<i>Biddulphia regia</i>	0	0	0	0	0	0
14	Bacillariophyta	<i>Biddulphia reticulata</i>	0	0	0	166.7	0	0
15	Bacillariophyta	<i>Biddulphia sinensis</i>	166.7	0	0	166.7	0	0
16	Bacillariophyta	<i>Cerataulina bergonii</i>	0	0	0	0	0	0
17	Bacillariophyta	<i>Cerataulina pelagica (Cleve)</i>	0	0	166.7	0	0	0
18	Bacillariophyta	<i>Cerataulina bicornis</i>	0	0	0	0	0	0
19	Bacillariophyta	<i>Chaetoceros affinis</i>	0	0	0	0	0	0
20	Bacillariophyta	<i>Chaetoceros atlanticus</i>	0	0	0	0	0	0
21	Bacillariophyta	<i>Chaetoceros borealis</i>	0	0	0	0	0	0
22	Bacillariophyta	<i>Chaetoceros castracanei</i>	0	0	0	0	0	0
23	Bacillariophyta	<i>Chaetoceros compressus</i>	0	0	0	0	0	166.7
24	Bacillariophyta	<i>Chaetoceros curvisetus</i>	0	0	0	0	0	0
25	Bacillariophyta	<i>Chaetoceros debilis</i>	0	0	0	0	0	0
26	Bacillariophyta	<i>Chaetoceros decipiens f. decipiens</i>	0	0	0	0	0	0
27	Bacillariophyta	<i>Chaetoceros decipiens f. singularis</i>	0	0	0	0	0	0
28	Bacillariophyta	<i>Chaetoceros densus</i>	0	0	0	0	0	0
29	Bacillariophyta	<i>Chaetoceros didymus</i>	0	0	0	0	0	0
30	Bacillariophyta	<i>Chaetoceros distans</i>	0	0	0	0	0	0
31	Bacillariophyta	<i>Chaetoceros diversus</i>	0	166.7	0	0	0	0
32	Bacillariophyta	<i>Chaetoceros lorenzianus</i>	0	0	0	0	0	0
33	Bacillariophyta	<i>Chaetoceros muelleri</i>	0	0	0	0	0	0
34	Bacillariophyta	<i>Chaetoceros pelagicus</i>	0	0	0	0	0	0
35	Bacillariophyta	<i>Chaetoceros pendulum</i>	0	0	0	0	0	0
36	Bacillariophyta	<i>Chaetoceros rostratus</i>	0	0	0	0	0	0
37	Bacillariophyta	<i>Chaetoceros subsecundus</i>	0	0	0	0	0	0
38	Bacillariophyta	<i>Chaetoceros teres</i>	0	0	0	0	0	0
39	Bacillariophyta	<i>Chaetoceros tortissimus</i>	0	0	0	0	0	0
40	Bacillariophyta	<i>Chaetoceros spp.</i>	0	333.3	0	0	0	333.3
41	Bacillariophyta	<i>Climacodium frauenfeldianum</i>	0	0	0	0	0	0
42	Bacillariophyta	<i>Coscinodiscus asteromphalus</i>	0	0	0	0	0	0
43	Bacillariophyta	<i>Coscinodiscus centralis</i>	0	0	166.7	0	0	0
44	Bacillariophyta	<i>Corethron criphilum</i>	0	0	0	0	0	0
45	Bacillariophyta	<i>Coscinodiscus granii</i>	0	166.7	0	0	0	0
46	Bacillariophyta	<i>Coscinodiscus oculus-iridis</i>	0	0	0	0	0	0
47	Bacillariophyta	<i>Coscinodiscus jonesianus</i>	0	0	0	0	0	0
48	Bacillariophyta	<i>Coscinodiscus lineatus</i>	0	0	0	0	0	0
49	Bacillariophyta	<i>Coscinodiscus radiatus</i>	166.7	0	166.7	500.0	333.3	166.7
50	Bacillariophyta	<i>Coscinodiscus waillesii</i>	0	0	0	0	0	0
51	Bacillariophyta	<i>Coscinodiscus sp.</i>	333.3	333.3	500.0	0	166.7	500.0
52	Bacillariophyta	<i>Cyclotella meneghiniana</i>	500.0	500.0	500.0	333.3	166.7	500.0
53	Bacillariophyta	<i>Coscinodiscus subtilis var. minorus</i>	0	0	0	0	0	0
54	Bacillariophyta	<i>Cyclotella meneghiniana</i>	0	0	0	0	0	0
55	Bacillariophyta	<i>Cyclotella striata</i>	0	0	0	0	0	0
56	Bacillariophyta	<i>Cyclotella spp.</i>	1666.7	1500.0	1500.0	1666.7	1166.7	4000.0
57	Bacillariophyta	<i>Cylindrotheca closterium</i>	166.7	833.3	333.3	333.3	166.7	333.3
58	Bacillariophyta	<i>Dactyliosolen fragilissimus</i>	0	166.7	166.7	0	0	0
59	Bacillariophyta	<i>Diploneis bombus</i>	166.7	0	166.7	0	333.3	0
60	Bacillariophyta	<i>Ditylum brightwelli</i>	0	0	0	0	166.7	166.7
61	Bacillariophyta	<i>Ditylum sol</i>	0	0	0	0	0	0
62	Bacillariophyta	<i>Donkinia sp.</i>	0	0	166.7	0	0	0
63	Bacillariophyta	<i>Entomoneis alata</i>	333.3	0	0	0	500.0	333.3
64	Bacillariophyta	<i>Eucampia cornuta</i>	0	0	0	0	0	333.3
65	Bacillariophyta	<i>Eucampia zodiacus</i>	0	166.7	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
66	Bacillariophyta	<i>Fragilariopsis rhombica</i>	166.7	0	0	0	0	0
67	Bacillariophyta	<i>Grammatophora marina</i>	0	0	0	0	0	0
68	Bacillariophyta	<i>Guinardia delicatula</i>	0	166.7	0	333.3	166.7	166.7
69	Bacillariophyta	<i>Guinardia flaccida</i>	0	0	0	0	166.7	166.7
70	Bacillariophyta	<i>Guinardia striata</i>	166.7	333.3	333.3	333.3	166.7	666.7
71	Bacillariophyta	<i>Gyrosigma tenuissimum</i>	0	0	0	0	0	0
72	Bacillariophyta	<i>Gyrosigma spp.</i>	333.3	166.7	0	500.0	166.7	0
73	Bacillariophyta	<i>Hemiaulus membranacus</i>	0	0	0	0	0	0
74	Bacillariophyta	<i>Hemiaulus hauckii</i>	166.7	0	166.7	0	0	0
75	Bacillariophyta	<i>Hemidiscus cuneiformis var. cuneiformis</i>	0	0	0	0	0	0
76	Bacillariophyta	<i>Hyalodiscus subtilis</i>	0	0	0	0	0	0
77	Bacillariophyta	<i>Lauderia borealis</i>	0	0	0	0	0	0
78	Bacillariophyta	<i>Lauderia annulata</i>	0	0	166.7	0	0	500.0
79	Bacillariophyta	<i>Leptocylindrus danicus</i>	0	0	0	0	0	0
80	Bacillariophyta	<i>Leptocylindrus mediterraneus</i>	500.0	0	0	333.3	166.7	333.3
81	Bacillariophyta	<i>Leptocylindrus minimus</i>	0	166.7	0	0	0	0
82	Bacillariophyta	<i>Licmophora abbreviata</i>	0	0	0	0	0	0
83	Bacillariophyta	<i>Licmophora tenuis</i>	0	0	0	0	0	0
84	Bacillariophyta	<i>Lithodesmium undulatum</i>	0	0	0	0	0	0
85	Bacillariophyta	<i>Melosira granulata</i>	0	0	0	0	0	0
86	Bacillariophyta	<i>Melosira moniliformis</i>	0	0	0	0	0	0
87	Bacillariophyta	<i>Melosira sulcata</i>	0	0	0	0	0	0
88	Bacillariophyta	<i>Navicula perminuta</i>	0	0	0	0	0	0
89	Bacillariophyta	<i>Navicula spp.</i>	1333.3	2000.0	166.7	1000.0	500.0	333.3
90	Bacillariophyta	<i>Nitzschia bicapitata</i>	166.7	0	333.3	166.7	166.7	0
91	Bacillariophyta	<i>Nitzschia longissima</i>	0	1000.0	500.0	500.0	166.7	833.3
92	Bacillariophyta	<i>Nitzschia lorenziana</i>	0	0	0	0	0	0
93	Bacillariophyta	<i>Nitzschia panduriformis</i>	166.7	166.7	166.7	0	166.7	0
94	Bacillariophyta	<i>Nitzschia spp.</i>	2166.7	4333.3	3500.0	4833.3	1833.3	10166.7
95	Bacillariophyta	<i>Paralia sulcata</i>	166.7	0	166.7	0	166.7	666.7
96	Bacillariophyta	<i>Pinnularia sp.</i>	833.3	666.7	333.3	1500.0	1500.0	1833.3
97	Bacillariophyta	<i>Planktoniella blanda</i>	166.7	166.7	0	166.7	500.0	1166.7
98	Bacillariophyta	<i>Pleurosigma acutum</i>	2500.0	1166.7	4333.3	18666.7	6333.3	16333.3
99	Bacillariophyta	<i>Pleurosigma angulatum</i>	1333.3	500.0	500.0	1166.7	1500.0	1000.0
100	Bacillariophyta	<i>Pleurosigma formosum</i>	333.3	0	0	166.7	0	0
101	Bacillariophyta	<i>Pleurosigma Normanii</i>	333.3	333.3	166.7	666.7	166.7	333.3
102	Bacillariophyta	<i>Pleurosigma pelagicum</i>	333.3	333.3	333.3	1500.0	1500.0	1666.7
103	Bacillariophyta	<i>Pleurosigma elongatum</i>	166.7	0	0	0	0	0
104	Bacillariophyta	<i>Pleurosigma sp.</i>	0	0	0	0	0	0
105	Bacillariophyta	<i>Pseudo-nitzschia delicatissima</i>	0	0	0	0	0	0
106	Bacillariophyta	<i>Pseudonitzschia pungens</i>	0	0	166.7	333.3	0	2000.0
107	Bacillariophyta	<i>Pseudo-nitzschia sp.</i>	0	0	0	0	0	0
108	Bacillariophyta	<i>Rhizosolenia alata f. gracillima</i>	166.7	166.7	166.7	666.7	666.7	1500.0
109	Bacillariophyta	<i>Rhizosolenia calcar-avis</i>	0	0	0	0	0	166.7
110	Bacillariophyta	<i>Rhizosolenia castracanei</i>	0	0	0	0	0	0
111	Bacillariophyta	<i>Rhizosolenia fragilima</i>	0	0	0	0	0	0
112	Bacillariophyta	<i>Rhizosolenia stouterfothii</i>	0	0	0	0	0	0
113	Bacillariophyta	<i>Rhizosolenia hebetata f. semispina</i>	0	0	0	0	0	0
114	Bacillariophyta	<i>Rhizosolenia setigera</i>	0	0	0	0	0	0
115	Bacillariophyta	<i>Rhizosolenia styliformis</i>	0	0	166.7	0	0	0
116	Bacillariophyta	<i>Rhizosolenia styliformis var. latissima</i>	0	0	0	0	500.0	0
117	Bacillariophyta	<i>Schroederella delicatula f. delicatula</i>	0	0	0	0	0	0
118	Bacillariophyta	<i>Schroederella delicatula f. schröderi</i>	3000.0	3333.3	3333.3	12000.0	11833.3	11666.7
119	Bacillariophyta	<i>Skeletonema costatum</i>	0	1166.7	333.3	166.7	166.7	1333.3
120	Bacillariophyta	<i>Stephanopyxis palmeriana</i>	5166.7	10500.0	6833.3	13333.3	11000.0	14333.3
121	Bacillariophyta	<i>Stephanopyxis turris var. turris</i>	333.3	0	0	0	0	0
122	Bacillariophyta	<i>Streptothecca tamesis</i>	0	0	0	0	0	0
123	Bacillariophyta	<i>Surirella sp.</i>	0	166.7	500.0	666.7	166.7	333.3
124	Bacillariophyta	<i>Synedra spp.</i>	1666.7	1333.3	1833.3	1000.0	1666.7	166.7
125	Bacillariophyta	<i>Synedra tabulata</i>	166.7	333.3	333.3	166.7	333.3	1166.7
126	Bacillariophyta	<i>Synedra ulna</i>	0	0	0	0	0	0
127	Bacillariophyta	<i>Thalassionema nitzschioides</i>	12500.0	4333.3	11500.0	15166.7	14500.0	12000.0
128	Bacillariophyta	<i>Thalassionema nitzschioides var parva</i>	0	0	0	0	0	0
129	Bacillariophyta	<i>Thalassiosira nordenskiöldii</i>	0	0	0	166.7	0	0
130	Bacillariophyta	<i>Thalassiothrix longissima</i>	0	0	0	0	0	0

Annex B Density (Cells / Litre) of Phytoplankton Recorded during the Baseline Surveys

			Dry Season					
Monitoring Date			12/02/2020					
Monitoring Location			R1					
Monitoring Depth			Shallow			Deep		
#	Phylum	Species name	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
131	Bacillariophyta	<i>Thalassiosira pacifica</i>	166.7	333.3	0	1000.0	333.3	0
132	Bacillariophyta	<i>Thalassiosira rotula</i>	9500.0	11500.0	13333.3	21000.0	19833.3	42166.7
133	Bacillariophyta	<i>Thalassiosira sp.</i>	0	0	0	0	0	0
134	Bacillariophyta	<i>Thalassiothrix frauenfeldii</i>	0	0	0	0	166.7	333.3
135	Bacillariophyta	<i>Triceratium favus</i>	0	0	0	0	0	0
136	Bacillariophyta	<i>Triceratium formosum f. quadrangularis</i>	0	0	0	0	0	0
137	Dinophyceae	<i>Alexandrium minutum</i>	0	0	0	0	0	0
138	Dinophyceae	<i>Alexandrium catenella</i>	0	0	0	0	0	0
139	Dinophyceae	<i>Alexandrium sp.</i>	0	0	0	0	0	0
140	Dinophyceae	<i>Akashiwo sanguinea</i>	0	0	0	0	0	0
141	Dinophyceae	<i>Ceratium furca</i>	0	0	0	0	0	0
142	Dinophyceae	<i>Ceratium fusus</i>	0	0	0	0	0	0
143	Dinophyceae	<i>Ceratium trichoceros</i>	0	0	0	0	0	0
144	Dinophyceae	<i>Ceratium tripos</i>	0	0	0	0	0	0
145	Dinophyceae	<i>Dinophysis acuminata</i>	0	0	0	0	0	0
146	Dinophyceae	<i>Dinophysis caudata</i>	0	0	0	0	0	333.3
147	Dinophyceae	<i>Dinophysis miles</i>	0	0	0	0	0	0
148	Dinophyceae	<i>Gonyaulax verior</i>	0	166.7	0	0	0	0
149	Dinophyceae	<i>Gonyaulax polygramma</i>	0	0	0	0	0	0
150	Dinophyceae	<i>Gonyaulax spinifera</i>	0	0	0	0	0	0
151	Dinophyceae	<i>Gymnodinium catenatum</i>	0	0	0	0	0	0
152	Dinophyceae	<i>Gymnodinium spp.</i>	333.3	500.0	333.3	166.7	166.7	500.0
153	Dinophyceae	<i>Gyrodinium spirale</i>	0	0	0	0	0	0
154	Dinophyceae	<i>Heterocapsa circularisquama</i>	166.7	166.7	0	0	0	333.3
155	Dinophyceae	<i>Lingulodinium polyedrum</i>	0	0	0	0	0	0
156	Dinophyceae	<i>Noctiluca scintillans</i>	0	0	0	0	333.3	0
157	Dinophyceae	<i>Karenia mikimotoi</i>	0	0	166.7	0	0	0
158	Dinophyceae	<i>Karenia sp.</i>	0	0	0	0	0	0
159	Dinophyceae	<i>Oxytoxum sp.</i>	0	0	166.7	0	0	0
160	Dinophyceae	<i>Peridinium bipes</i>	0	0	0	0	0	0
161	Dinophyceae	<i>Prorocentrum compressum</i>	0	0	0	0	0	0
162	Dinophyceae	<i>Prorocentrum donghaiense</i>	0	0	0	0	0	0
163	Dinophyceae	<i>Prorocentrum micans</i>	0	0	0	0	0	0
164	Dinophyceae	<i>Prorocentrum minimum</i>	0	0	166.7	0	0	0
165	Dinophyceae	<i>Prorocentrum sigmoides</i>	0	0	0	0	0	0
166	Dinophyceae	<i>Protoberidinium conicum</i>	0	0	0	0	0	166.7
167	Dinophyceae	<i>Protoberidinium divergens</i>	0	0	0	0	0	0
168	Dinophyceae	<i>Protoberidinium elegans</i>	0	0	0	0	0	0
169	Dinophyceae	<i>Protoberidinium latissimum</i>	0	0	0	0	0	0
170	Dinophyceae	<i>Protoberidinium oceanicum</i>	0	0	0	0	0	0
171	Dinophyceae	<i>Protoberidinium pellucidum</i>	166.7	166.7	166.7	0	0	0
172	Dinophyceae	<i>Protoberidinium pentagonum</i>	0	0	0	0	0	0
173	Dinophyceae	<i>Protoberidinium sp.</i>	166.7	0	0	0	166.7	0
174	Dinophyceae	<i>Pyrophacus horoiogicum</i>	0	0	0	0	0	0
175	Dinophyceae	<i>Pyrophacus steinii</i>	0	0	0	166.7	0	0
176	Dinophyceae	<i>Scrippsiella trochoidea</i>	166.7	166.7	0	0	0	0
177	Cyanobacteria	<i>Oscillatoria sp.</i>	166.7	0	0	0	0	0
178	Cyanobacteria	<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0
179	Cyanobacteria	<i>Trichodesmium hildebrandtii</i>	0	0	0	0	0	0
180	Chlorophyta	<i>Chlorella sp.</i>	0	0	0	0	0	166.7
181	Chlorophyta	<i>Dunaliella salina</i>	0	0	0	0	0	0
182	Chlorophyta	<i>Pyramimonas sp.</i>	0	0	0	0	0	0
183	Cryptophyta	<i>Cryptomonas sp.</i>	0	0	0	0	0	0
184	Cryptophyta	<i>Plagioselmis prolunga</i>	0	0	0	0	0	0
185	Euglenophyta	<i>Eutreptiella sp.</i>	166.7	0	0	333.3	166.7	0
186	Ochrophyta	<i>Chattonella marina</i>	0	166.7	0	166.7	0	0
187	Ochrophyta	<i>Cocconeis sp.</i>	0	0	0	0	0	0
188	Ochrophyta	<i>Dictyocha fibula</i>	166.7	0	333.3	166.7	500.0	1000.0
189	Ochrophyta	<i>Heterosigma akashiwo</i>	333.3	0	0	0	0	0
190	Ochrophyta	<i>Phaeocystis globosa</i>	333.3	0	0	0	166.7	500.0

ANNEX C

RAW DATA FOR ZOOPLANKTON

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
				19/09/2019					
Density (No. per m ³)				S1					
Monitoring Date									
Monitoring Location									
Monitoring Depth				Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	1.512	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	5.951	50.584	16.636	0	0	0
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	11.902	2.976	0	5.962	20.866	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	26.780	0	6.050	11.924	2.981	6.167
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	2.976	0	3.025	0	0	0
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0	0	0	0	0	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	14.878	26.780	24.198	5.962	8.943	12.334
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	1.512	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	2.976	2.976	1.512	5.962	5.962	6.167
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	2.976	0	8.943	2.981	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	17.853	14.878	9.074	2.981	17.885	3.083
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	2.981	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	32.731	50.584	54.446	92.408	107.313	64.752
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	2.981	2.981	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	2.981	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0	5.962	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	470.133	264.822	222.321	178.854	199.721	160.338
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	2.976	0	0	0	8.943	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	32.731	11.902	6.050	2.981	14.905	18.501
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	11.902	5.951	12.099	2.981	8.943	0
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	2.981	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	3.083
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	8.943	3.083
37	Arthropoda	--	<i>Copepoda</i> larvae	2.976	0	0	0	2.981	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	2.976	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	5.962	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	6.050	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	2.976	0	1.512	8.943	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	2.976	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	2.976	0	0	2.981	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	0	0	0	0	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	71.413	65.462	36.297	50.675	20.866	43.168
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	2.981	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	8.927	2.976	1.512	5.962	5.962	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	5.951	2.976	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	1.512	0	0	3.083
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	32.731	86.290	58.983	53.656	68.561	43.168
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	8.927	8.927	9.074	11.924	20.866	12.334
67	Chordata	--	Fish larvae	2.976	8.927	1.512	2.981	5.962	3.083
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
Density (No. per m ³)			Monitoring Date	19/09/2019					
			Monitoring Location	S1					
			Monitoring Depth	Shallow			Deep		
			#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	0	0	0	5.962	0	0
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0	0	0	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	2.976	10.587	2.981	0	1.542
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	2.976	0	0	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	0	0	2.981	8.943	6.167
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	14.878	23.804	12.099	29.809	23.847	49.335
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	2.976	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	95.217	98.192	57.471	77.504	50.675	30.834
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	0	0	0	0	0	0
85	Arthropoda	Macrura	Macrura larvae	315.406	279.700	192.073	181.835	250.396	101.753
86	Arthropoda	Carcinidae	Megalopa larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	2.976	6.050	8.943	2.981	6.167
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	26.780	20.829	27.223	17.885	26.828	9.250
89	Arthropoda	--	Mysida larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	0	0	0	0	0
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	2.976	0	3.025	0	0	0
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0	0	0	0	0
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaeidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaeidae	<i>Oncaea venusta</i>	0	0	0	0	0	0
100	Echinodermata	--	Ophiopluteus larva	2.976	2.976	3.025	0	0	0
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	2.976	2.976	0	0	0	6.167
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	8.927	0	0	0	0	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	2901.139	1627.613	1385.346	1254.962	1505.358	1094.617
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	2.976	29.755	9.074	8.943	5.962	9.250
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0	0	0	1.490	0	0
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0	0	0	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0	0	0	0	0
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	755.784	740.906	287.353	679.647	804.845	422.430
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0
123	Chaetognatha	Sagittidae	Sagittidae larvae	0	0	0	2.981	8.943	3.083
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	2.976	11.902	4.537	0	2.981	3.083
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	11.902	14.878	24.198	26.828	41.733	21.584
127	Arthropoda	Scolecitrichidae	<i>Scolecitrichella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	62.486	44.633	52.934	59.618	71.542	70.919
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	0	0	0
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	1306.256	1097.969	1149.414	724.360	1237.076	906.528
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	41.657	65.462	78.644	86.446	89.427	49.335
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	0	0	0
Overall Biomass (g/m ³ wet weight)				0.09	0.09	0.09	0.15	0.18	0.23

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Wet Season

Density (No. per m ³)			Monitoring Date	19/09/2019					
			Monitoring Location	S2					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	0	8.536	8.142	0	5.397	2.829
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	20.355	8.096	10.795	11.316
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	12.805	12.805	0	16.192	16.192	16.974
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	4.268	4.268	0	0	0	0
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0	0	0	0	0	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	38.414	17.073	28.497	16.192	5.397	16.974
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	4.268	2.035	5.397	0	4.243
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	2.134	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	0	12.805	0	2.699	2.699	0
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	2.699	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	25.609	34.146	30.532	48.576	37.781	79.210
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	2.699	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	2.699	5.397	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	2.699	5.397	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	4.268	0	5.397	2.699	4.243
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	4.268	0	0	0	0	2.829
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	1182.296	405.480	225.939	283.361	283.361	297.037
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	17.073	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	0	4.268	8.142	8.096	8.096	11.316
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	12.805	8.536	4.071	10.795	13.493	0
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	0	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	Copepoda larvae	25.609	8.536	8.142	0	2.699	5.658
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	2.829
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	6.106	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	0	0	6.106	0	2.699	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	4.268	0	0	0	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	21.341	21.341	48.852	53.973	26.987	48.092
51	Arthropoda	--	Crustacea larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	5.397	2.699	5.658
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	4.268	8.536	14.248	5.397	0	14.145
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	12.805	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	4.268	0	2.699	2.699	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	4.268	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	29.878	29.878	71.242	56.672	29.685	22.631
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	8.536	8.536	6.106	18.891	13.493	5.658
67	Chordata	--	Fish larvae	0	0	2.035	5.397	2.699	5.658
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
Density (No. per m ³)			Monitoring Date	19/09/2019					
			Monitoring Location	S2					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	0	2.134	0	2.699	0	0
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0	0	0	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	4.268	0	0	0	0
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	8.536	6.106	2.699	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	4.268	8.536	0	8.096	13.493	8.487
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	8.536	4.268	14.248	10.795	0	25.460
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	38.414	64.023	111.952	110.646	94.454	36.776
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	0	0	0	0	0	0
85	Arthropoda	Macrura	<i>Macrura</i> larvae	157.924	170.729	205.584	186.208	137.632	166.906
86	Arthropoda	Carcinidae	<i>Megalopa</i> larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	8.536	6.106	0	0	2.829
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	4.268	25.609	10.177	2.699	2.699	8.487
89	Arthropoda	--	<i>Mysida</i> larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	0	0	0	0	0
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	17.073	17.073	4.071	2.699	0	2.829
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0	0	0	0	0
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0	0	0
100	Echinodermata	--	<i>Ophiopluteus</i> larva	0	4.268	4.071	0	0	0
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	4.268	8.536	54.958	29.685	24.288	0
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	4.268	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	2.035	0	0	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	1327.415	1929.233	1314.922	1079.469	671.969	1683.208
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	<i>Polychaeta</i> larvae	29.878	21.341	59.029	8.096	10.795	16.974
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0	0	0	2.699	0	0
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0	0	0	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0	0	0	0	0
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	405.480	452.431	327.713	412.897	213.195	526.179
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	8.536	0	4.071	5.397	5.397	16.974
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	4.268	4.268	4.071	2.699	2.699	1.414
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	21.341	17.073	28.497	45.877	24.288	33.947
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	76.828	85.364	107.881	45.877	64.768	113.157
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	0	0	0
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	0	1323.147	1219.255	1109.154	1157.730	1295.646
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	230.484	217.679	95.668	62.069	29.685	107.499
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	0	0	0
Overall Biomass (g/m ³ wet weight)				0.23	0.16	0.18	0.43	0.34	0.48

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
				Monitoring Date		19/09/2019			
Density (No. per m ³)				Monitoring Location					
				R1					
				Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	3.773	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	15.091	86.772	32.304	0	0	0
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	49.045	0	36.342	35.332	11.777	50.869
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	11.318	7.545	0	27.481	35.332	27.391
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	0	0	0	0	0	0
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0	0	0	0	0	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	3.773	3.773	0	7.852	3.926	11.739
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	2.019	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	162.226	101.863	228.148	176.660	219.844	309.129
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	7.545	26.409	10.095	47.109	54.961	39.130
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	0	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	3.926	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	2.019	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	3.773	3.773	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	18.863	7.545	36.342	47.109	19.629	46.956
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	3.773	11.318	0	3.926	7.852	27.391
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	15.091	37.727	16.152	7.852	3.926	27.391
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	0	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0	7.852	3.913
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	2.019	11.777	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	3.913
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	7.545	0	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	0	7.545	10.095	0	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	1.963	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	3.773	0	0	0	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	7.545	15.091	12.114	35.332	15.703	15.652
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	11.318	2.019	0	0	3.913
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	3.773	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	3.773	3.773	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	384.815	365.951	379.574	164.883	196.289	285.651
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	67.908	41.500	84.798	19.629	51.035	70.434
67	Chordata	--	Fish larvae	0	0	0	0	0	0
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
Density (No. per m ³)			Monitoring Date	19/09/2019					
			Monitoring Location	R1					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	0	1.886	0	3.926	0	7.826
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0	0	0	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	7.545	11.318	0	0	0	0
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	7.545	3.773	0	3.926	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	0	0	0	0	0
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	11.777	0	3.913
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	3.773	15.091	2.019	15.703	43.184	35.217
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	0	0	0	0	0	0
85	Arthropoda	Macrura	Macrura larvae	169.771	267.861	220.072	137.403	196.289	230.869
86	Arthropoda	Carcinidae	Megalopa larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	7.545	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	3.773	2.019	0	0	3.913
89	Arthropoda	--	Mysida larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0.047	0.009	0.010	0.039	0.049	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	3.773	8.076	0	0	0
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	0	11.318	0	7.852	11.777	3.913
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	3.913
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0	2.019	0	0	0
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaeidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaeidae	<i>Oncaea venusta</i>	0	0	0	0	0	0
100	Echinodermata	--	Ophiopluteus larva	3.773	3.773	4.038	0	0	0
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	3.773	3.773	0	7.852	0	7.826
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	3.773	0	0	3.926	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	1165.762	1641.121	1142.760	1668.459	1519.279	2289.120
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	11.318	18.863	12.114	7.852	7.852	11.739
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0	0	0	0	0	0
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0	0	0	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0	0	0	0	0
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	67.908	113.181	46.437	105.996	235.547	258.260
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	3.773	3.773	10.095	19.629	15.703	23.478
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	3.773	0	3.926	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	3.773	7.545	0	3.926	7.852	7.826
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	3.773	22.636	8.076	7.852	31.406	35.217
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	0	0	0
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	147.135	301.815	304.871	188.438	357.247	410.868
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	3.773	11.318	6.057	3.926	15.703	35.217
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	0	0	0
Overall Biomass (g/m ³ wet weight)				0.22	0.19	0.22	0.34	0.29	0.30

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Wet Season

Density (No. per m ³)			Monitoring Date	03/10/2019					
			Monitoring Location	S1					
#	Phylum	Family	Monitoring Depth	Shallow			Deep		
			Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	9.380	93.799	76.653	94.886	127.347	104.763
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	119.594	30.485	16.768	57.431	24.970	38.845
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	25.795	63.315	35.931	67.419	52.437	56.501
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	1.172	0.117	0.120	1.248	2.497	1.766
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	0	23.450	14.373	4.994	4.994	4.708
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0.240	0	0.125	0.059
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	2.345	14.070	0	27.467	17.479	21.188
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	37.520	77.384	71.863	54.934	57.431	52.970
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	0	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	2.497	1.177
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	2.345	4.690	9.582	44.946	29.964	35.313
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	2.497	0	1.177
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	2.345	2.345	2.395	1.248	1.248	1.177
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	9.380	16.415	4.791	1.248	0.250	0.706
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	0	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0	2.497	1.177
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	0	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahl</i>	0	0	0	0	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	2.395	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	2.497	0	1.177
49	Mollusca	Creseidae	<i>Creseis acicula</i>	9.380	0	0	0	0	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	0.117	0	0.120	0	0.125	0.059
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0.125	0	0.059
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	2.345	4.690	28.745	12.485	7.491	9.417
67	Chordata	--	Fish larvae	4.690	0.117	4.791	4.994	4.994	4.708
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
Density (No. per m ³)			Monitoring Date	03/10/2019					
			Monitoring Location	S1					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0.006	0	0	0
70	Mollusca	--	Gastropoda larvae	0	0	0	0	0	0
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0.006	0	0	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	2.345	2.345	0	0	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	0.006	0	0	0	0
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0.117	2.345	0.120	0	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0.006	0	7.186	0.125	0.006	0.062
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0.117	7.035	0.024	0.125	0.006	0.062
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	44.555	16.415	11.977	12.485	4.994	8.240
85	Arthropoda	Macrura	Macrura larvae	7.035	18.760	114.980	94.886	77.407	81.221
86	Arthropoda	Carcinidae	Megalopa larva	0	0.117	0	0	0.125	0.059
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0
89	Arthropoda	--	Mysida larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	89.109	2.345	2.395	0.019	0	0.009
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	0	2.345	0	0	0	0
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0.006	4.791	0	12.485	5.886
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	7.035	0	0	0	0	0
98	Arthropoda	Oncaeidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaeidae	<i>Oncaea venusta</i>	0.117	0	0	0	0	0
100	Echinodermata	--	Ophiopluteus larva	0	0	0	17.479	0	8.240
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	21.105	7.035	0	2.497	7.491	4.708
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0	0	0	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	14.982	2.497	8.240
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	2.345	0.018	4.791	0.125	2.497	1.236
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0	0	0	0.250	0	0.118
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0.006	0	0	0	0	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0.006	4.690	0	0	0	0
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	49.245	283.743	11.977	87.395	122.353	98.878
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	2.345	105.524	55.095	139.832	144.826	134.191
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0.006	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	11.725	37.520	16.768	32.461	17.479	23.542
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	0.125	2.497	1.236
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	2.345	21.105	11.977	27.467	12.485	18.834
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	2.345	2.345	2.395	0.375	7.491	3.708
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0.006	0	0	0	0	0
Overall Biomass (g/m ³ wet weight)				0.04	0.06	0.03	0.11	0.09	0.10

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

			Wet Season						
			Monitoring Date	03/10/2019					
Density (No. per m ³)			Monitoring Location	S2					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	109.766	85.374	30.218	51.579	51.579	63.644
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	19.514	12.196	7.554	0	18.052	12.729
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	29.271	51.224	22.663	38.684	28.368	30.549
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0.252	0.129	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	7.318	0.122	0	12.895	0	0.127
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	9.757	2.439	5.036	5.158	5.158	7.637
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0.013	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0.122	0	0	0	0.255
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	26.832	9.757	5.036	0	30.947	38.187
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	119.523	121.963	143.534	118.631	144.420	170.567
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	0	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	9.757	2.439	2.518	7.737	5.158	15.275
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	4.879	4.879	2.518	7.737	0.006	2.546
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.006	0.122	0.126	2.579	0.129	2.546
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	0	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	2.546
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	18.052	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	7.318	0	0	0	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	0	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	0	0	0	0	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0.127
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	0	0	0	0	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	0.122	0	1.259	0	0.129	1.273
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	31.710	34.150	15.109	33.526	38.684	20.366
67	Chordata	--	Fish larvae	12.196	7.318	2.518	1.289	2.579	5.092
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	12.196	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season							
Density (No. per m ³)			Monitoring Date	03/10/2019							
			Monitoring Location	S2							
#			Phylum	Family	Species	Shallow			Deep		
						Monitoring Depth	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0	0	
70	Mollusca	--	Gastropoda larvae	0	0	0	0	0	0	0.127	
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0	0	
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0	0	0	0	0	0	
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0	0	
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	1.220	0	2.579	0	0	0	
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	0	0.126	0	0	0	2.546	
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0.129	0	0	
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	2.439	0.006	0.019	5.158	1.289	0.255	0	
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0	0	
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0	0	
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0	0	
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0	0	
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0.244	0.006	0.013	1.289	2.579	0.382	0	
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0	0	
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	7.318	17.075	17.627	12.895	5.158	5.092	0	
85	Arthropoda	Macrura	<i>Macrura</i> larvae	158.552	73.178	95.689	134.104	79.947	162.929	0	
86	Arthropoda	Carcinidae	<i>Megalopa</i> larva	0	0	0	0.006	0	0	0	
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0	0	
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0	0	
89	Arthropoda	--	<i>Mysida</i> larva	0	0	0	0	0	0	0	
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0	0	
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0	0	
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	4.879	0	0	5.158	5.158	0	0	
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	0	0	0	0	0	0	0	
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0	0	
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0	0	
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	4.879	0	5.158	0.006	5.092	0	
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0	0	
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0	0	0	0	0	0	
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0	0	0	0	
100	Echinodermata	--	<i>Ophiopluteus</i> larva	17.075	0	7.554	0	0	2.546	0	
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	2.439	2.518	5.158	7.737	5.092	0	
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	5.158	0	0.006	0	
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0	0	
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0	0	
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0	0	
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0	0	0	0	0	
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0.122	24.393	10.073	20.631	1.289	12.729	0	
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0	0	
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0	0	
110	Annelidae	--	<i>Polychaeta</i> larvae	4.879	2.439	2.518	7.737	0.258	2.546	0	
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0	0	
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0	0	
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0	2.439	0	0	2.579	0	0	
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0	0	
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0	0	
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	30.947	0	0	0	
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0.126	0	0	2.546	0	
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0	0	0	0	0	
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0	0	0	0	0	0	
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	65.860	82.935	67.990	38.684	54.157	73.827	0	
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0	0	
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0	0	
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	36.589	60.981	62.953	36.105	41.263	40.732	0	
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0	0	
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0	0	
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0	0	
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0	0	
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0	0	
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0	0	
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	21.953	7.318	25.181	54.157	64.473	73.827	0	
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	0.129	0	5.092	0	
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	24.393	21.953	2.518	28.368	12.895	22.912	0	
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	4.879	0	5.036	15.474	2.579	10.183	0	
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0	0	
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	0	0	0	0	
Overall Biomass (g/m ³ wet weight)				0.08	0.06	0.05	0.32	0.25	0.24	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Wet Season

Density (No. per m ³)			Monitoring Date	03/10/2019					
			Monitoring Location	R1					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	127.513	136.307	140.641	155.721	111.229	168.441
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	15.390	39.573	93.004	46.203	53.048	21.277
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	54.963	68.154	52.173	39.358	56.470	31.915
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	1.711	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0.110	0.110	0.113	0.171	0	0.887
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	15.390	30.779	15.879	11.979	5.134	23.050
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	0	0	0	0	0
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	1.099	2.268	0.086	0.086	1.773
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	4.397	2.199	0.113	0	0	0.887
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	0	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	26.382	26.382	34.026	34.310	18.823	63.830
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	0	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	24.184	26.382	13.610	11.979	18.823	12.411
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	0	0	0	1.711	0.004	0
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.110	0	0	0	1.711	0
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	0	0	0	0	0	0
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0	0.856	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	0	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	0	0	0	0	1.711	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	0	0	0	0	0.887
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	3.546
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0	0	0	0	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	6.596	2.199	4.537	3.422	1.711	15.958
67	Chordata	--	Fish larvae	2.199	2.199	2.268	0.856	1.711	1.773
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Wet Season					
Density (No. per m ³)			Monitoring Date	03/10/2019					
			Monitoring Location	R1					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0.113	0	0	0
70	Mollusca	--	Gastropoda larvae	0	0	0	0	0	0
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0	0	0	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0
74	Arthropoda	Pontellidae	Labidocera larvae	0	0	0	0	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	0	2.268	0.086	0	0
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0.006	0.086	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	0.004	0	0.089
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	1.099	0	0	3.422	0	1.773
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0	0	0	0
84	Arthropoda	Luciferidae	Belzebub larvae	2.199	6.596	13.610	8.556	17.112	15.958
85	Arthropoda	Macrura	Macrura larvae	26.382	10.993	11.342	15.401	6.845	17.731
86	Arthropoda	Carcinidae	Megalopa larva	0	0.110	2.268	0.856	1.711	0.089
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0
89	Arthropoda	--	Mysida larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0.005	2.199	0	0.856	0	1.773
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	0	0	0	0	0	0
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0	0	0	0	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0.016	2.199	0.113	1.711	0	1.773
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0	0	0
100	Echinodermata	--	Ophiopluteus larva	0	0	0	0	0	0
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0.005	0	0.004	1.711	0
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	2.199	0	0	0	0	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	0	0	0.887
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	0	2.199	0.113	0.086	0.086	1.773
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0.004
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0.110	0.330	0.340	0.004	0	0.177
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0	0	0	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0	1.711	1.711	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0	0.006	0	0	0
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	314.386	362.753	124.762	213.902	123.207	214.540
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	0	0	0	0	0	0
123	Chaetognatha	Sagittidae	Sagittidae larvae	98.933	266.019	220.035	162.565	111.229	92.199
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0.856	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0.110	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	19.787	28.581	22.684	29.091	20.535	26.596
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0	1.711	0	0
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	2.199	6.596	4.537	5.134	13.690	17.731
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	1.099	0.005	0.113	0.086	0	1.773
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	2.268	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0.113	0	0	0
Overall Biomass (g/m ³ wet weight)				0.08	0.08	0.08	0.09	0.09	0.07

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	18/12/2019					
			Monitoring Location	S1					
#	Phylum	Family	Monitoring Depth	Shallow			Deep		
			Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	2.685	4.027	4.593	5.629	0.141	9.757
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	37.587	30.875	26.901	22.517	18.295	12.545
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0.671	0.007	0	0	0.007	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	5.370	2.685	1.968	2.815	5.629	5.575
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	16.109	6.712	3.281	2.815	8.444	4.182
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0.007	0	0.656	0.704	1.407	1.394
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0.007	0.028	0.139
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0.134	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0.141	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	1.342	0	1.312	0	0	0.139
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	Bivalvia larvae	1.342	0	0.131	0	0	0.007
21	Arthropoda	--	Brachyura larvae	2.685	4.027	0	4.222	0.141	0.007
22	Arthropoda	--	Calanoida larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	1.342	2.685	1.312	1.407	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	1.342	1.342	0.656	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	5.370	6.712	8.530	18.295	9.851	8.363
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	2.685	2.685	2.625	1.407	0.007	4.182
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.007	1.342	1.312	0.141	0	0.139
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	4.027	6.712	3.281	2.815	0.021	6.969
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	Cirripedia larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	Copepoda larvae	0	0	3.937	0	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	0	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahl</i>	4.027	1.342	1.968	0.141	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	1.342	1.342	1.312	0	1.407	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0.007	0	0	0	0	1.394
49	Mollusca	Creseidae	<i>Creseis acicula</i>	1.342	0.007	0	0.704	0.704	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	0.697
51	Arthropoda	--	Crustacea larvae	8.054	5.370	0	0	0	1.394
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0.027	0.134	0.656	0	0.007	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	1.342	1.342	0.020	0.007	0	0
58	Echinodermata	--	Echinopluteus larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0.007	0.007
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	4.027	2.685	0.656	0	0.704	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	0	0.007	0.656	0	0	0
67	Chordata	--	Fish larvae	0	0.134	0	0.007	0.007	0.139
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	18/12/2019							
			Monitoring Location	S1							
#			Phylum	Family	Species	Shallow			Deep		
						Monitoring Depth	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0		
70	Mollusca	--	Gastropoda larvae	0.671	0	0	1.407	1.407	1.394		
71	Cnidaria	--	Hydromedusae larva	1.342	0	0	0	0	0		
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	1.349	0	1.312	1.407	0	1.394		
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0.141	0	0.007		
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	0	0	0	0	0		
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0	1.342	2.625	2.815	1.407	0.697		
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0		
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	0	0	0		
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0.141	0		
79	Mollusca	Limacinidae	<i>Limacina trochiformis</i>	0	0.007	0.656	0.007	0.704	0		
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0.134	0	0.141	0.141	1.394		
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0		
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0	0	0	0	0	0.139		
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0.134	0	0	0	0.021	0		
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	1.342	0.671	0.131	4.222	0	0		
85	Arthropoda	Macrura	<i>Macrura</i> larvae	2.685	4.027	3.281	2.815	7.037	2.788		
86	Arthropoda	Carcinidae	<i>Megalopa</i> larva	0	0	0	0	0	0		
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0		
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0		
89	Arthropoda	--	<i>Mysida</i> larva	0	0	0.394	0	0	0.697		
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0		
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0		
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	4.027	5.249	0	0	20.908		
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	42.957	57.724	40.680	92.883	112.586	55.755		
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	30.875	9.397	0	43.627	45.034	37.635		
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0		
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0	0.656	1.407	0	0		
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0		
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0	0.656	0	0	0.697		
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0	1.407	0.007		
100	Echinodermata	--	<i>Ophiopluteus</i> larva	2.685	4.027	1.312	1.407	0	2.788		
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	2.685	2.685	3.281	1.407	4.222	0		
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0		
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0.007	0	0	0	0		
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0		
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0		
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0.007	0	0	0	0	0		
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0.656	0	0	0		
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0.141	0	0		
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0.141	0	0		
110	Annelidae	--	<i>Polychaeta</i> larvae	2.685	2.685	2.625	5.629	1.407	0.139		
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0.131	0	0	0		
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0		
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0.007	0	0	0	0.704	0		
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0		
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0.007	1.342	0.656	0	0	0		
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	5.370	14.767	12.466	0	0.141	2.788		
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0		
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	0.656	2.815	1.407	4.182		
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	4.027	0	1.312	0.007	0.007	0		
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	17.451	20.136	26.245	29.554	22.517	58.543		
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0.134	0.131	0	0	0.139		
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	16.109	6.712	9.842	15.481	21.110	1.394		
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	5.370	4.027	7.874	7.037	5.629	5.575		
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0		
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0		
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0		
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0		
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0		
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0.007	0	0		
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	14.767	16.109	11.810	26.739	18.295	27.877		
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	25.506	0	1.968	4.222	0	0		
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	5.370	34.903	16.403	37.998	0	27.877		
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	5.370	17.451	5.249	8.444	0.704	1.394		
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0		
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	4.027	1.342	0.656	2.815	4.222	5.575		
Overall Biomass (g/m ³ wet weight)				0.08	0.08	0.08	0.14	0.13	0.10		

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	18/12/2019					
			Monitoring Location	S2					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	20.942	0	17.500	0	0	1.376
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	110.526	94.238	94.501	25.996	4.333	5.505
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0.006	0	0	0	0	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	0.006	0.116	1.167	2.888	1.444	1.376
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	2.327	1.163	0	1.444	0.722	5.505
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0.006	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0.117	1.444	0.007	6.881
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0.117	0	0	1.376
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	2.327	4.654	2.333	0	0	0
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	0	29.167	0.144	0.578	2.753
21	Arthropoda	--	<i>Brachyura</i> larvae	2.327	0	0	4.333	5.777	2.753
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	1.163	0	0	0	0.144	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0.006	1.167	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	9.307	3.490	7.000	4.333	5.777	5.505
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	5.817	1.163	3.500	1.444	1.444	1.376
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	2.327	1.163	5.833	0.007	2.888	2.753
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	2.327	2.327	4.667	1.444	1.444	2.753
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	1.163	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	1.163	0	2.333	1.444	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	1.163	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	2.327	1.163	1.167	1.444	0	0
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0	0.006	0	0	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0.688
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	1.163	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0	0	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0.116	0	0	0	0	0.688
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0.144	0
51	Arthropoda		<i>Crustacea</i> larvae	2.327	2.327	2.333	0	2.888	0
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0.722	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0.007	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	1.444	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	1.163	1.163	1.167	4.333	0.144	1.376
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0.007	1.376
66	Chordata	--	Fish eggs	0.006	0.116	1.167	0.144	1.444	1.376
67	Chordata	--	Fish larvae	0.116	0.582	0	0	0	0
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	18/12/2019							
			Monitoring Location	S2							
#			Phylum	Family	Species	Shallow			Deep		
						Monitoring Depth	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0		
70	Mollusca	--	Gastropoda larvae	0.012	0.006	0	5.777	0.007	1.376		
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0		
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0	0.116	0.117	1.444	0.144	4.129		
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0		
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	0	0	2.888	0	0		
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0.116	0	3.500	0	0	0.688		
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0		
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	0	0	0		
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0.116	0	0	0	0	0		
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0	0	0		
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0.006	0	0	2.888	0	0		
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0		
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0.233	0	5.833	0	0	0		
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	17.451	0	0	0.144	0		
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	5.817	0	0	0	4.333	0.007		
85	Arthropoda	Macrura	<i>Macrura</i> larvae	5.817	5.817	0	4.333	2.888	4.129		
86	Arthropoda	Carcinidae	<i>Megalopa</i> larva	0	0	0	0	0	0		
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0		
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0		
89	Arthropoda	--	<i>Mysida</i> larva	2.327	0	0	0	1.444	0		
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0		
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	2.753		
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	2.327	38.501	0	0	0		
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	39.557	5.817	0	0	0.007	0		
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	24.432	36.066	0	277.296	223.859	264.244		
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0		
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	1.163	0	0	0	0		
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0		
98	Arthropoda	Oncaeiidae	<i>Oncaea clevei</i>	1.163	0	0	0	0	0		
99	Arthropoda	Oncaeiidae	<i>Oncaea venusta</i>	0	1.163	0	1.444	0	0		
100	Echinodermata	--	<i>Ophiopluteus</i> larva	1.163	0	3.500	0	0	2.753		
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	4.654	2.327	0	5.777	1.444	1.376		
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0		
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	4.333	0.144	0		
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0		
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0		
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0	0.007	0	0		
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	0	0	0		
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0.116	0	0	0	0	0		
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0		
110	Annelidae	--	<i>Polychaeta</i> larvae	0	1.163	0.583	0.007	0	1.376		
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0		
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0		
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0.006	0	0	0	0	0		
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	1.444	0	0		
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0.722	0	0.007		
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	12.798	13.961	1.167	5.777	2.888	0		
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0		
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0	2.333	2.888	0	0.007		
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0.116	0	0	0	0	0		
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	37.230	54.681	54.834	50.549	36.106	57.803		
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0.582	0.583	0	0.722	0		
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	8.144	0	0	0	0	0		
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	24.432	8.144	2.333	7.221	2.888	6.881		
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0		
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0		
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0		
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0		
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0		
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0		
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	8.144	3.723	21.000	7.221	7.221	13.763		
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	3.490	0	0.018	0	0.007	0.007		
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	12.798	18.615	18.667	4.333	2.888	8.258		
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	17.451	5.817	9.333	2.888	4.333	1.376		
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0		
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	1.163	0.116	3.500	1.444	2.888	2.753		
Overall Biomass (g/m ³ wet weight)				0.12	0.10	0.06	0.13	0.15	0.15		

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	18/12/2019					
			Monitoring Location	R1					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	65.491	37.423	16.983	35.876	31.998	25.504
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	138.467	303.130	148.314	70.783	64.965	33.666
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0	0	0	0	0	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	0	0.009	1.132	0	0.097	0.510
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0	1.871	0.006	0.485	0	0.005
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0.566	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	0	0	0	0.005	0.005	1.530
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0.187	3.742	1.132	0	0	0
21	Arthropoda	--	<i>Brachyura</i> larvae	0	0.187	1.132	0	0.485	1.020
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	0	0	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0.005
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	0.936	1.871	3.397	0	0	0
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	3.742	1.871	2.264	1.939	1.939	2.040
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.187	0	0.566	0	0.005	0
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	5.614	0.936	4.529	3.879	4.848	2.040
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0.970	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	1.871	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	1.871	1.132	0	0.005	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	1.871	7.485	3.397	1.939	1.939	0.510
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0.187	1.871	0	1.939	1.939	1.020
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	1.871	0	0.006	0.097	0.005	0.005
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0	0.009	0	0	0.970	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	0
51	Arthropoda	--	<i>Crustacea</i> larvae	0	0.009	0	0	0.485	0.102
52	Bryozoa	Electridae	<i>Electra</i> larvae	1.871	0	0	0.970	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0.102
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0.097	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	0	0	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	0.019	1.871	0.006	0.485	0.097	0.102
67	Chordata	--	Fish larvae	0	0.009	0	0	0.005	0
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

			Dry Season						
Density (No. per m ³)			Monitoring Date	18/12/2019					
			Monitoring Location	R1					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	1.881	1.871	0	0	0	0
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0.187	0	1.132	0.005	0	0
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0
74	Arthropoda	Pontellidae	Labidocera larvae	0	0.187	0	0	0.097	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0.009	0	0	0	0	0.102
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Lenzia subtiloides</i>	0	0	0	0	0	0
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0
79	Mollusca	Limacinidae	<i>Limacina trochiformis</i>	0	0.936	0	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0	0	0
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hanseni</i>	3.742	13.098	0.113	1.939	0	0.204
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0	0.566	0	4.848	0.510
84	Arthropoda	Luciferidae	Belzebub larvae	0	0	0	0	0	2.040
85	Arthropoda	Macrura	Macrura larvae	0	0.009	0.566	0.485	1.939	2.040
86	Arthropoda	Carcinidae	Megalopa larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0
89	Arthropoda	--	Mysida larva	0	0	0	0	0	0
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	0	0	2.909	0	0
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	1.871	13.098	2.264	3.879	5.818	1.020
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0.009	0.936	2.264	0.097	0	0
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	14.969	0.936	1.132	6.787	0.970	0.005
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaeidae	<i>Oncaea clevei</i>	0	0	0	0	0	0
99	Arthropoda	Oncaeidae	<i>Oncaea venusta</i>	0	0	0	0	0	0
100	Echinodermata	--	Ophiopluteus larva	0.936	0.936	0	0	0	0
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0.187	0	1.939	0.097	0
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	5.614	0	1.132	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0	1.939	0.005	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	0	0	0
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	0	0.009	1.132	0.005	0	0
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadae</i>	0.936	0	0	0.005	0	0.005
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0	0.097	0
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0.936	0.009	0.113	0	0	0
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	9.356	5.614	0	0	0	0
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0	0.187	0.113	2.909	0.970	2.040
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	145.952	84.203	96.234	98.902	104.720	75.493
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	44.908	39.295	0.113	3.879	40.724	32.646
123	Chaetognatha	Sagittidae	Sagittidae larvae	59.878	39.295	26.040	4.848	35.876	18.363
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0
127	Arthropoda	Scolecithricidae	<i>Scolecithricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaeginidae	<i>Solmundella bitentaculata</i>	0	0	0	0.005	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	43.973	20.583	9.063	25.210	36.846	16.323
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0	0.006	0	0	0
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	13.098	3.742	13.586	3.879	5.818	4.081
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0.187	1.871	0	0.970	0.970	2.040
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	0	0	0
Overall Biomass (g/m ³ wet weight)				0.15	0.15	0.10	0.10	0.10	0.06

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	12/02/2020					
			Monitoring Location	S1					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	2.857	3.714	4.453	10.859	9.049	5.587
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	29.143	24.857	21.670	106.180	97.734	22.969
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0.289	0.003	0	0.003	0	0.310
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	3.429	2.000	2.078	0.063	0.664	4.966
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	9.714	4.286	2.672	1.810	0.603	9.312
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0.003	0.286	0.594	0.003	0.003	0.624
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0.003	0	0.060	0.062
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0.057	0	0	0	0.060	0.062
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0.059	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	0.571	0.571	0.594	3.620	3.620	0.683
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	Bivalvia larvae	0.571	0.057	0.059	0	15.082	0.624
21	Arthropoda	--	Brachyura larvae	2.857	1.714	1.781	1.207	0	1.245
22	Arthropoda	--	Calanoida larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	1.714	1.714	1.187	0.603	0	0.621
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	1.143	0.857	0.297	0.003	0.606	0.621
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	5.143	6.571	11.577	6.636	5.430	6.208
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	2.286	2.286	1.781	3.620	2.413	3.104
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.574	1.143	0.653	1.810	3.620	0.065
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	4.571	4.286	2.672	2.413	3.620	4.966
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	Cirripedia larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	Copepoda larvae	0	1.714	1.781	0	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0.603	0.603	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0	0	0	0.603	1.207	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0.603	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	2.286	1.429	0.950	1.810	1.207	1.862
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	1.143	1.143	0.594	0	0.003	0.621
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0.603	0.603	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0.003	0	0	0	0	0.624
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0.574	0.003	0.297	0.060	0	0.621
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	0.310
51	Arthropoda	--	Crustacea larvae	5.714	2.286	0	2.413	2.413	4.345
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0.069	0.343	0.297	0	0	0.012
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	1.143	0.580	0.012	0	0	0.621
58	Echinodermata	--	Echinopluteus larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0.003
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	2.857	1.429	0.297	1.207	1.207	1.862
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	0.003	0.289	0.297	0.063	0.664	0
67	Chordata	--	Fish larvae	0.057	0.057	0.003	0.362	0.302	0.062
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Dry Season					
Density (No. per m ³)			Monitoring Date	12/02/2020					
			Monitoring Location	S1					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	0.286	0	0.594	0.009	0.003	0.931
71	Cnidaria	--	Hydromedusae larva	0.571	0	0	0	0	0.621
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0.574	0.571	1.187	0.060	0.121	1.245
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0.059	0	0	0.003
74	Arthropoda	Pontellidae	<i>Labidocera</i> larvae	0	0	0	0	0	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0.571	1.714	2.375	0.060	1.810	0.310
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Leptothoe subtiloides</i>	0	0	0	0	0	0
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0.060	0	0
79	Mollusca	Limacinidae	<i>Limacina trochiformis</i>	0.003	0.289	0.300	0	0	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0.057	0.057	0.059	0.003	0	0.621
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0	0	0	0.121	3.016	0.062
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0.057	0	0	9.049	9.049	0.062
84	Arthropoda	Luciferidae	<i>Belzebub</i> larvae	0.857	0.343	1.840	3.016	0	0.621
85	Arthropoda	Macrura	<i>Macrura</i> larvae	2.857	3.143	2.672	6.033	3.016	2.483
86	Arthropoda	Carcinidae	<i>Megalopa</i> larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0
89	Arthropoda	--	<i>Mysida</i> larva	0	0.171	0.178	1.207	0	0.310
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	1.714	4.000	2.375	1.207	21.115	9.312
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	42.857	42.285	57.589	23.528	3.016	44.696
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	17.143	4.000	18.405	31.371	18.702	31.039
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0	0.286	0.891	0.603	0.603	0
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0.286	0.297	0.603	0	0.310
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0.603	0.603	0.003
100	Echinodermata	--	<i>Ophiopluteus</i> larva	2.857	2.286	1.187	0.603	1.810	2.483
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	2.286	2.571	2.078	3.620	1.207	1.242
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0.003	0.003	0	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	0	0	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0.003	0	0	0	0	0.003
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0.286	0.297	0	0	0
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0.059	0.060	0	0
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0.059	0	0	0
110	Annelidae	--	<i>Polychaeta</i> larvae	2.286	2.286	3.562	0.603	0.905	1.304
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0.057	0.059	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0.003	0	0	0.003	0	0.003
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0.574	0.857	0.297	0	0	0.003
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	8.571	11.714	5.640	13.876	7.843	3.725
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	0.286	1.484	0	1.207	1.862
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	1.714	0.571	0.597	0.060	0	1.862
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	16.000	20.000	24.342	47.660	56.710	34.143
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0.057	0.114	0.059	0.302	0.603	0.062
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	9.714	7.143	10.983	4.223	0	8.070
123	Chaetognatha	Sagittidae	<i>Sagittidae</i> larvae	4.000	5.143	6.531	16.892	5.430	4.966
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0
127	Arthropoda	Scolecitricidae	<i>Scolecitricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0.003	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	13.143	12.000	16.624	6.154	12.790	19.244
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	10.857	0.857	2.672	1.810	0.009	11.795
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	17.143	22.000	23.451	16.289	19.305	14.899
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	9.714	9.714	5.937	12.066	7.843	3.104
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	2.286	0.857	1.484	0.664	1.870	4.345
Overall Biomass (g/m ³ wet weight)				0.11	0.10	0.11	0.15	0.20	0.17

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	12/02/2020					
			Monitoring Location	S2					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	10.078	8.398	9.420	30.714	19.545	11.094
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	98.539	90.701	62.171	131.790	163.620	57.808
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0.003	0	0	0	0	0.003
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	0.059	0.616	1.884	0.003	0.561	0.587
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	1.680	0.560	0.628	0.558	0.561	3.504
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0.003	0.003	0	0	0	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0.056	0.691	0	0	2.920
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0	0	0	0.279	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0.056	0.063	0	0	0.584
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	3.359	3.359	1.256	0	0	1.168
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	<i>Bivalvia</i> larvae	0	13.997	15.763	1.173	1.675	1.168
21	Arthropoda	--	<i>Brachyura</i> larvae	1.120	0	1.884	0.056	0.614	2.336
22	Arthropoda	--	<i>Calanoida</i> larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0.560	0	0	0	0	0.584
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0.003	0.563	0.628	0	0	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	6.159	5.039	5.652	0.838	2.234	7.007
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	3.359	2.240	2.512	1.675	1.675	3.504
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	1.680	3.359	3.143	0.056	0.279	2.336
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	2.240	3.359	3.140	1.955	2.513	2.336
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	<i>Cirripedia</i> larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	<i>Copepoda</i> larvae	0	0	0	0	0	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0.560	0.560	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0	0	0	0.558	0.558	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0.560	1.120	1.884	0.558	1.117	0.584
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0.560	0	0	0	0	0.584
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	1.680	1.120	1.256	2.792	3.909	1.168
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0	0.003	0.003	0.614	0.558	0
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0.292
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0.560	0.560	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0	0	0	0.558	0.003	0
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0.056	0	0	0.003	0.003	0.350
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	0
51	Arthropoda		<i>Crustacea</i> larvae	2.240	2.240	1.256	0.003	0.003	1.168
52	Bryozoa	Electridae	<i>Electra</i> larvae	0	0	0	0.558	0	0
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0	0	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0.314	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0.003	0	0	0
58	Echinodermata	--	<i>Echinopluteus</i> larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	1.120	1.120	2.512	0	0	1.168
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0.584
66	Chordata	--	Fish eggs	0.059	0.616	0.691	0.564	0.561	0.587
67	Chordata	--	Fish larvae	0.336	0.280	0	0.003	0.003	0.058
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	12/02/2020					
			Monitoring Location	S2					
			Monitoring Depth	Shallow			Deep		
#	Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0
70	Mollusca	--	Gastropoda larvae	0.008	0.003	2.512	1.120	0.558	0.590
71	Cnidaria	--	Hydromedusae larva	0	0	0	0	0	0
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0.056	0.112	0.691	0.056	0.558	1.752
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0	0
74	Arthropoda	Pontellidae	Labidocera larvae	0	0	1.256	0.056	0.056	0
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0.056	1.680	1.884	0.003	0	0.350
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	0	0	0
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0.056	0	0	0	0	0.058
79	Mollusca	Limacinae	<i>Limacina trochiformis</i>	0	0	0	0.279	0.279	0
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0.003	0	1.256	0	0	0.003
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	0.112	2.799	3.140	5.026	3.965	0.117
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	8.398	8.398	0	0	0.279	0
84	Arthropoda	Luciferidae	Belzebub larvae	2.799	0	0	0	0	2.923
85	Arthropoda	Macrura	Macrura larvae	5.599	2.799	1.884	0.003	0.282	4.671
86	Arthropoda	Carcinidae	Megalopa larva	0	0	0	0	0	0
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0
89	Arthropoda	--	Mysida larva	1.120	0	0	0	0	1.168
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	1.168
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	1.120	19.596	20.724	0	0	0
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	21.835	2.799	0	4.467	5.026	19.853
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	29.114	17.356	120.574	0.282	1.396	124.374
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	0.560	0.560	0	4.747	0.838	0
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0
98	Arthropoda	Oncaeidae	<i>Oncaea clevei</i>	0.560	0	0	0	0	0.584
99	Arthropoda	Oncaeidae	<i>Oncaea venusta</i>	0.560	0.560	0.628	0	0	0
100	Echinodermata	--	Ophiopluteus larva	0.560	1.680	1.884	0.558	0.279	1.752
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	3.359	1.120	2.512	0.056	0.056	2.920
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	1.884	0	0	0
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0	0	0	1.675	0.558	0
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0.003	0	0	0
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	0	0	0
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0.056	0	0	0	0	0.058
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0	0
110	Annelidae	--	Polychaeta larvae	0.560	0.840	0.317	0.003	0.561	0.584
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0	0	0
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0.003	0	0	0.279	0	0.003
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0.628	0	0	0
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0.314	0	0	0.003
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	12.877	7.278	3.140	0.282	0.059	6.423
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	0	1.120	2.512	4.467	1.675	0.003
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0.056	0	0	0.056	0.112	0.058
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	44.231	52.629	51.495	68.687	72.596	43.210
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0.280	0.560	0.314	0	0	0
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	3.919	0	0	25.129	11.783	4.087
123	Chaetognatha	Sagittidae	Sagittidae larvae	15.677	5.039	4.396	29.597	24.571	15.182
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0
127	Arthropoda	Scolecitricidae	<i>Scolecitricella longispinosa</i>	0	0	0	0	0	0
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0	0	0	0
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	5.711	11.870	14.444	19.266	10.613	9.927
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	1.680	0.008	0.009	0	0.003	1.755
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	15.117	17.916	11.932	5.026	7.818	9.927
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	11.198	7.278	6.280	0.614	0.558	9.343
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0.616	1.736	2.512	0	0	1.752
Overall Biomass (g/m ³ wet weight)				0.15	0.19	0.14	0.17	0.15	0.17

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

Dry Season

Density (No. per m ³)			Monitoring Date	12/02/2020					
			Monitoring Location	R1					
#			Monitoring Depth	Shallow			Deep		
			Phylum	Family	Species	Replicate 1	Replicate 2	Replicate 3	Replicate 1
1	Arthropoda	Acartiidae	<i>Acartia clausii</i>	0	0	0	0	0	0
2	Arthropoda	Acartiidae	<i>Acartia erythraea</i>	21.662	13.785	23.182	3.202	3.898	35.032
3	Arthropoda	Acartiidae	<i>Acartia</i> larvae	0	0	0	0	0	0
4	Arthropoda	Acartiidae	<i>Acartia (Acartia) negligens</i>	0	0	0	0	0	0
5	Arthropoda	Acartiidae	<i>Acartia pacifica mertoni</i>	92.949	115.398	90.945	26.312	22.275	62.473
6	Arthropoda	Acartiidae	<i>Acartia spinicauda</i>	0	0	0	0	0	0
7	Arthropoda	Sergestidae	<i>Acetes japonicus</i>	0	0	0	0	0	0
8	Arthropoda	Sergestidae	<i>Acetes</i> larvae	0	0	0	0.142	0.001	0
9	Arthropoda	Paracalanidae	<i>Acrocalanus gibber</i>	0.002	0.396	0.446	2.645	1.949	0.292
10	Arthropoda	Paracalanidae	<i>Acrocalanus longicornis</i>	0.394	0.396	0.225	6.822	3.341	0.003
11	Arthropoda	Paracalanidae	<i>Acrocalanus</i> sp.	0	0	0	0	0	0
12	Phoronida	Phoronidae	<i>Phoronis</i> sp.	0	0	0	0.141	0.418	0
13	Cnidaria	Aequoreidae	<i>Aequorea parva</i>	0	0	0	0	0	0
14	Cnidaria	Rhopalonematidae	<i>Aglaura hemistoma</i>	0	0	0	0	0.001	0
15	Arthropoda	Squillidae	<i>Alima</i> larvae	0	0.197	0.223	0	0	0
16	Mollusca	Atlantidae	<i>Atlanta turriculata</i>	0	0	0	0.028	0	0
17	Echinodermata	Synaptidae	<i>Protankyra</i> larvae	0	0	0	0	0.028	0
18	Arthropoda	Balanidae	<i>Balanus</i> larvae	0	0	0.002	0.557	0.557	0.876
19	Arthropoda	--	<i>Cyclopoida</i> sp.	0	0	0	0	0	0
20	Mollusca	--	Bivalvia larvae	0.827	1.182	0.446	0.306	0.056	0.058
21	Arthropoda	--	Brachyura larvae	0.039	0.433	0.446	2.227	1.671	0.584
22	Arthropoda	--	Calanoida larvae	0	0	0	0	0	0
23	Arthropoda	Pontellidae	<i>Calanopia elliptica</i>	0	0	0	1.671	1.392	0
24	Arthropoda	Caligidae	<i>Caligus</i> sp.	0	0	0	0	0	0.003
25	Arthropoda	Paracalanidae	<i>Calocalanus pavo</i>	0	0	0	0	0	0
26	Arthropoda	Candaciidae	<i>Candacia bradyi</i>	0	0	0	0.975	0.557	0
27	Arthropoda	Candaciidae	<i>Candacia</i> larvae	0	0	0	0	0	0
28	Arthropoda	Calanidae	<i>Canthocalanus pauper</i>	0.591	1.575	1.337	5.708	8.632	0.292
29	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
30	Arthropoda	Centropagidae	<i>Centropages furcatus</i>	1.182	1.182	1.783	2.227	1.949	2.335
31	Arthropoda	Centropagidae	<i>Centropages orsinii</i>	0.039	0.197	0.223	0.837	0.863	0.058
32	Arthropoda	Centropagidae	<i>Centropages tenuiremis</i>	1.378	1.772	3.566	4.316	3.341	2.919
33	Arthropoda	Centropagidae	<i>Centropages dorsispinatus</i>	0	0	0	0	0	0
34	Arthropoda	Actideidae	<i>Chiridius poppei</i>	0	0	0	0	0	0
35	Arthropoda	--	Cirripedia larvae	0	0	0	0	0	0
36	Arthropoda	Clausocalanidae	<i>Clausocalanus arcuicornis</i>	0	0	0	0	0	0
37	Arthropoda	--	Copepoda larvae	0	0	0.446	0.835	1.671	0
38	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus affinis</i>	0	0	0	0	0	0
39	Arthropoda	Corycaecidae	<i>Onychocorycaeus agilis</i>	0	0	0	0	0	0
40	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus andrewsi</i>	0.394	0.394	0	0	0	0
41	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus asiaticus</i>	0.394	0.788	0.446	0	0	0
42	Arthropoda	Corycaecidae	<i>Corycaeus crassiusculus</i>	0	0	0	0	0	0
43	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus dahli</i>	1.969	2.757	2.229	1.810	1.142	0.876
44	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus erythraeus</i>	0.433	0.394	0.892	1.114	0.835	0.642
45	Arthropoda	Corycaecidae	<i>Farranula gibbula</i>	0	0	0	0	0	0
46	Arthropoda	Corycaecidae	<i>Onychocorycaeus pacificus</i>	0	0	0	0	0	0
47	Arthropoda	Corycaecidae	<i>Corycaeus speciosus</i>	0	0	0	0	0	0
48	Arthropoda	Corycaecidae	<i>Ditrichocorycaeus subtilis</i>	0.394	0.002	0.047	0.001	0	0.587
49	Mollusca	Creseidae	<i>Creseis acicula</i>	0.002	0.002	0	0.281	0.141	0
50	Mollusca	Creseidae	<i>Creseis clava</i>	0	0	0	0	0	0
51	Arthropoda	--	Crustacea larvae	0.002	0.002	0	3.898	1.114	0.058
52	Bryozoa	Electridae	<i>Electra</i> larvae	0.394	0	0.446	0	0	0.584
53	Arthropoda	Cypridinidae	<i>Cypridina</i> larvae	0	0	0	0	0	0.058
54	Mollusca	Desmopteridae	<i>Desmopterus papilio</i>	0	0	0	0	0	0
55	Cnidaria	Diphyidae	<i>Diphyes chamissonis</i>	0	0	0	0.200	0.306	0
56	Chordata	Dolioidae	<i>Doliolitta gegenbauri</i>	0	0	0	0	0	0
57	Chordata	Dolioidae	<i>Doliolum denticulatum</i>	0	0	0	0.839	0.288	0
58	Echinodermata	--	Echinopluteus larva	0	0	0	0	0	0
59	Cnidaria	Eirenidae	<i>Eirene averuciformis</i>	0	0	0	0	0	0
60	Cnidaria	Eirenidae	<i>Eirene</i> larvae	0	0	0	0	0	0
61	Arthropoda	Euchaetidae	<i>Euchaeta</i> larva	0	0	0	2.088	0.835	0
62	Arthropoda	Halocypridae	<i>Euconchoecia aculeata</i>	0	0	0	0	0	0
63	Arthropoda	Tachidiidae	<i>Euterpina acutifrons</i>	0	0	0	0	0	0
64	Arthropoda	Podonidae	<i>Pseudevadne tergestina</i>	0	0	0	0	0	0
65	Arthropoda	Corycaecidae	<i>Farranula</i> larvae	0	0	0	0	0	0
66	Chordata	--	Fish eggs	0.398	0.396	0.225	0.142	0.280	0.064
67	Chordata	--	Fish larvae	0.002	0.002	0	0.056	0.029	0
68	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0	0	0	0	0	0

Annex C Density (No. per m³) and Biomass (g/m³ wet weight) of Zooplankton Recorded during the Baseline Surveys

				Dry Season							
Density (No. per m ³)			Monitoring Date	12/02/2020							
			Monitoring Location	R1							
#			Phylum	Family	Species	Shallow			Deep		
						Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
69	Arthropoda	Gammaridae	Gammaridae sp.	0	0	0	0	0	0		
70	Mollusca	--	Gastropoda larvae	0.790	0.394	0	0.139	0.278	0.587		
71	Cnidaria	--	Hydromedusae larva	0	0	0	0.278	0	0		
72	Arthropoda	Pontellidae	<i>Labidocera acuta</i>	0.039	0.394	0.448	0.558	0.835	0.058		
73	Arthropoda	Pontellidae	<i>Labidocera euchaeta</i>	0	0	0	0	0.028	0		
74	Arthropoda	Pontellidae	Labidocera larvae	0.039	0.039	0	0	0	0		
75	Arthropoda	Pontellidae	<i>Labidocera minuta</i>	0.002	0	0	1.114	1.949	0.061		
76	Arthropoda	Pontellidae	<i>Labidocera rotunda</i>	0	0	0	0	0	0		
77	Cnidaria	Diphyidae	<i>Lensia subtiloides</i>	0	0	0	0	0	0		
78	Arthropoda	Lestrigonidae	<i>Lestrigonus bengalensis</i>	0	0	0	0	0	0		
79	Mollusca	Limacinidae	<i>Limacina trochiformis</i>	0.197	0.197	0	0.142	0.281	0		
80	Cnidaria	Geryoniidae	<i>Liriope tetraphylla</i>	0	0	0	0.056	0.056	0		
81	Arthropoda	Lucicutiidae	<i>Lucicutia ovalis</i>	0	0	0	0	0	0		
82	Arthropoda	Luciferidae	<i>Belzebub hansenii</i>	3.545	2.796	0.936	0	0	1.284		
83	Arthropoda	Luciferidae	<i>Belzebub intermedius</i>	0	0.197	0.223	0.028	0	0.292		
84	Arthropoda	Luciferidae	Belzebub larvae	0	0	0	0.585	1.030	1.168		
85	Arthropoda	Macrura	Macrura larvae	0.002	0.199	0.446	2.924	2.784	1.168		
86	Arthropoda	Carcinidae	Megalopa larva	0	0	0	0	0	0		
87	Arthropoda	Ectinosomatidae	<i>Microsetella rosea</i>	0	0	0	0	0	0		
88	Cnidaria	Diphyidae	<i>Muggiaea atlantica</i>	0	0	0	0	0	0		
89	Arthropoda	--	Mysida larva	0	0	0	0.084	0.167	0		
90	Cnidaria	Nausithoidae	<i>Nausithoe punctata</i>	0	0	0	0	0	0		
91	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) albicans</i>	0	0	0	0	0	0		
92	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) dioica</i>	0	0	1.337	2.784	3.063	0		
93	Chordata	Oikopleuridae	<i>Oikopleura (Coecaria) longicauda</i>	3.151	3.545	2.675	41.487	47.613	1.168		
94	Chordata	Oikopleuridae	<i>Oikopleura (Vexillaria) rufescens</i>	0.199	0.985	0.936	10.302	10.581	0.003		
95	Arthropoda	Oithonidae	<i>Oithona attenuata</i>	0	0	0	0	0	0		
96	Arthropoda	Oithonidae	<i>Oithona brevicornis brevicornis</i>	3.348	0.591	3.566	0.139	0.557	4.674		
97	Arthropoda	Oithonidae	<i>Oithona</i> larva	0	0	0	0	0	0		
98	Arthropoda	Oncaecidae	<i>Oncaea clevei</i>	0	0	0	0.139	0.278	0		
99	Arthropoda	Oncaecidae	<i>Oncaea venusta</i>	0	0	0	0	0	0		
100	Echinodermata	--	Ophiopluteus larva	0.394	0.197	0	2.506	1.671	0.292		
101	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	0.039	0.039	0.892	2.367	2.227	0		
102	Arthropoda	Paracalanidae	<i>Paracalanus gracilis</i>	0	0	0	0	0	0		
103	Arthropoda	Paracalanidae	<i>Paracalanus parvus parvus</i>	0	0	0	0.003	0.001	0		
104	Arthropoda	Paracalanidae	<i>Paracalanus</i> sp.	0	0	0	0	0	0		
105	Arthropoda	Paracalanidae	<i>Paracalanus aculeatus</i>	1.182	0.394	0.446	0	0	1.752		
106	Arthropoda	Paracalanidae	<i>Parvocalanus crassirostris</i>	0	0	0.892	0.001	0	0		
107	Arthropoda	Sididae	<i>Penilia avirostris</i>	0	0	0	0.139	0.278	0		
108	Arthropoda	Mysidae	<i>Rhopalophthalmus</i> larvae	0	0	0	0	0.028	0		
109	Ctenophora	Pleurobrachiidae	<i>Pleurobrachia globosa</i>	0	0	0	0	0.028	0		
110	Annelidae	--	Polychaeta larvae	0.002	0.396	0.448	2.227	2.784	0		
111	Arthropoda	Pontellidae	<i>Pontella</i> larva	0	0	0	0.028	0.056	0		
112	Arthropoda	Pontellidae	<i>Pontellopsis tenuicauda</i>	0	0	0	0	0	0		
113	Arthropoda	Pontellidae	<i>Pontellopsis yamadai</i>	0.197	0	0.002	0.001	0	0.295		
114	Arthropoda	Halocyprididae	<i>Porroecia porrecta</i>	0	0	0	0	0	0		
115	Arthropoda	Mysidae	<i>Promysis orientalis</i>	0	0	0	0.697	0.557	0		
116	Arthropoda	Euphausiidae	<i>Pseudeuphausia</i> larvae	0.199	0.041	0.045	9.885	8.353	0.292		
117	Arthropoda	Pseudodiaptomidae	<i>Pseudodiaptomus bispinosus</i>	0	0	0	0	0	0		
118	Chaetognatha	Sagittidae	<i>Zonosagitta bedoti</i>	3.151	1.182	0	0.139	0.835	2.919		
119	Chaetognatha	Sagittidae	<i>Aidanosagitta delicata</i>	0.039	0.079	1.382	1.114	0.558	1.168		
120	Chaetognatha	Sagittidae	<i>Flaccisagitta enflata</i>	48.444	51.201	83.366	17.542	21.161	88.747		
121	Chaetognatha	Sagittidae	<i>Ferosagitta ferox</i>	0	0	0	0.084	0.084	0		
122	Chaetognatha	Sagittidae	<i>Flaccisagitta hexaptera</i>	17.723	8.310	1.828	8.214	8.632	32.696		
123	Chaetognatha	Sagittidae	Sagittidae larvae	20.874	17.329	12.483	4.455	5.569	29.193		
124	Chaetognatha	Sagittidae	<i>Aidanosagitta neglecta</i>	0	0	0	0	0	0		
125	Chaetognatha	Sagittidae	<i>Decipisagitta decipiens</i>	0	0	0	0	0	0		
126	Arthropoda	Sapphirinidae	<i>Sapphirina nigromaculata</i>	0	0	0	0	0	0		
127	Arthropoda	Scolecitricidae	<i>Scolecitricella longispinosa</i>	0	0	0	0	0	0		
128	Arthropoda	Sergestidae	<i>Sergestes</i> larva	0	0	0	0	0	0		
129	Cnidaria	Solmundellaegonidae	<i>Solmundella bitentaculata</i>	0	0	0.002	0	0.001	0		
130	Arthropoda	Subeucalanidae	<i>Subeucalanus crassus</i>	13.588	7.485	15.160	12.251	13.643	23.063		
131	Arthropoda	Temoridae	<i>Temora discaudata</i>	0	0.002	0.002	5.708	1.671	0		
132	Arthropoda	Temoridae	<i>Temora turbinata</i>	3.545	5.514	7.133	19.073	21.718	6.422		
133	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) gracilis</i>	0.433	0.394	0.446	9.467	7.518	1.226		
134	Arthropoda	Tortanidae	<i>Tortanus (Tortanus) forcipatus</i>	0	0	0	0	0	0		
135	Arthropoda	Calanidae	<i>Undinula vulgaris</i>	0	0	0	1.531	1.114	0		
Overall Biomass (g/m ³ wet weight)				0.11	0.08	0.12	0.16	0.16	0.20		

ANNEX D

RAW DATA FOR BENTHIC ORGANISMS

Monitoring Date					27/08/2019					
Monitoring Location					S1		S2		R1	
#	Phylum	Class	Family	Species	Replicate 1	Replicate 2	Replicate 1	Replicate 2	Replicate 1	Replicate 2
1	Annelida	Polychaeta	Amphinomidae	<i>Linopherus paucibranchiata</i>	1	0	0	0	2	0
2	Annelida	Polychaeta	Thalassematidae	<i>Anelassorhynchus sabinus</i>	0	0	0	0	0	1
3	Annelida	Polychaeta	Dorvilleidae	<i>Schistomeringos rudolphi</i>	1	0	0	1	0	0
4	Annelida	Polychaeta	Eunicidae	<i>Lysidice ninetta</i>	0	0	0	0	1	0
5	Annelida	Polychaeta	Eunicidae	<i>Marphysa stragulum</i>	0	0	0	0	0	0
6	Annelida	Polychaeta	Lumbrineridae	<i>Lumbrineris shiinoi</i>	0	0	1	0	1	1
7	Annelida	Polychaeta	Onuphidae	<i>Onuphis eremita</i>	0	0	0	0	0	2
8	Annelida	Polychaeta	Chrysopetalidae	<i>Bhavanina brevis</i>	1	0	1	0	0	0
9	Annelida	Polychaeta	Glyceridae	<i>Glycera alba</i>	0	0	0	0	2	3
10	Annelida	Polychaeta	Goniadidae	<i>Glycinde gurjanovae</i>	1	0	0	0	0	0
11	Annelida	Polychaeta	Hesionidae	<i>Ophiodromus angustifrons</i>	0	4	1	0	3	2
12	Annelida	Polychaeta	Lacydoniidae	<i>Paralacydonia paradox</i>	0	0	0	0	1	1
13	Annelida	Polychaeta	Nephtyidae	<i>Aglaphomus dibranchis</i>	1	4	2	3	2	1
14	Annelida	Polychaeta	Nereididae	<i>Leonnates persica</i>	1	0	0	0	0	0
15	Annelida	Polychaeta	Nereididae	<i>Leonnates</i> sp.	0	0	0	0	0	0
16	Annelida	Polychaeta	Phyllodocidae	<i>Eteone</i> sp.	0	0	0	0	1	0
17	Annelida	Polychaeta	Pilargidae	<i>Otopsis</i> sp.	0	3	0	0	1	2
18	Annelida	Polychaeta	Pilargidae	<i>Sigambra hanaokai</i>	2	3	3	1	5	4
19	Annelida	Polychaeta	Polynoidea	<i>Harmothoe</i> sp.	0	0	1	0	1	1
20	Annelida	Polychaeta	Syllidae	<i>Syllis</i> sp.	0	0	0	0	1	2
21	Annelida	Polychaeta	Oweniidae	<i>Owenia fusiformis</i>	0	0	0	0	1	0
22	Annelida	Polychaeta	Magelonidae	<i>Magelona</i> sp.	1	5	2	1	5	11
23	Annelida	Polychaeta	Poecilochaetidae	<i>Poecilochaetus</i> sp.	0	0	0	1	0	0
24	Annelida	Polychaeta	Spionidae	<i>Aonides oxycephala</i>	0	0	0	0	0	0
25	Annelida	Polychaeta	Spionidae	<i>Laonice cirrata</i>	1	2	0	1	8	5
26	Annelida	Polychaeta	Spionidae	<i>Prionospio malmgreni</i>	0	0	0	0	0	0
27	Annelida	Polychaeta	Spionidae	<i>Prionospio</i> sp.	2	3	1	2	11	7
28	Annelida	Polychaeta	Spionidae	<i>Scolecopsis</i> sp.	2	2	1	2	2	8
29	Annelida	Polychaeta	Ampharetidae	<i>Anobothrus</i> sp.	3	1	1	0	2	1
30	Annelida	Polychaeta	Cirratulidae	<i>Chaetozone</i> sp.	0	0	0	0	3	0
31	Annelida	Polychaeta	Cirratulidae	<i>Cirriformia</i> sp.	1	2	1	0	0	2
32	Annelida	Polychaeta	Cirratulidae	<i>Tharyx</i> sp.	0	3	0	0	1	2
33	Annelida	Polychaeta	Pectinariidae	<i>Pectinaria conchilega</i>	0	0	0	2	0	1
34	Annelida	Polychaeta	Sternaspidae	<i>Sternaspis scutata</i>	0	1	0	1	4	0
35	Annelida	Polychaeta	Terebellidae	<i>Amaeana</i> sp.	0	0	0	0	0	0
36	Annelida	Polychaeta	Terebellidae	<i>Pista</i> sp.	1	1	0	0	1	1
37	Annelida	Polychaeta	Trichobranchidae	<i>Terebellides stroemii</i>	0	0	0	0	6	3
38	Annelida	Polychaeta	Trichobranchidae	<i>Trichobranchus</i> sp.	0	0	0	0	0	2
39	Annelida	Polychaeta	Capitellidae	<i>Capitella</i> sp.	2	4	1	0	9	9
40	Annelida	Polychaeta	Capitellidae	<i>Notomastus</i> sp.	0	0	0	1	18	9
41	Annelida	Polychaeta	Cossuridae	<i>Cossura dimorpha</i>	1	2	0	0	1	0
42	Annelida	Polychaeta	Maldanidae	Maldanidae spp.	0	5	1	0	10	4
43	Annelida	Polychaeta	Opheliidae	<i>Ophelia acuminata</i>	0	1	0	1	1	3
44	Annelida	Polychaeta	Orbiniidae	<i>Phylo ornatus</i>	0	1	0	0	1	1
45	Annelida	Polychaeta	Paraonidae	<i>Aricidea</i> sp.	0	0	0	0	0	2
46	Annelida	Polychaeta	Paraonidae	<i>Cirrophorus miyakoensis</i>	0	0	0	0	0	1
47	Annelida	Polychaeta	Paraonidae	<i>Paraonis</i> sp.	1	0	0	0	0	0
48	Annelida	Polychaeta	Scalibregmidae	<i>Scalibregma inflatum</i>	0	0	0	0	2	4
49	Arthropoda	Malacostraca	Ampeliscaidae	<i>Ampelisca</i> sp.	1	5	0	0	1	5
50	Arthropoda	Malacostraca	Corophiidae	<i>Corophium</i> sp.	0	1	0	0	3	0
51	Arthropoda	Malacostraca	Maeridae	<i>Ceradocus</i> sp.	0	0	0	2	3	3
52	Arthropoda	Malacostraca	Bodotriidae	<i>Eocuma</i> sp.	0	0	0	0	0	0
53	Arthropoda	Malacostraca	Alpheidae	<i>Alpheus digitalis</i>	0	0	0	0	0	0
54	Arthropoda	Malacostraca	Alpheidae	<i>Betaeus</i> sp.	0	0	0	1	0	0
55	Arthropoda	Malacostraca	Callinassidae	<i>Nihonotrypaea japonica</i>	1	0	0	2	3	2
56	Arthropoda	Malacostraca	Goneplacidae	<i>Typhlocarcinops denticarpus</i>	0	1	0	0	0	0
57	Arthropoda	Malacostraca	Pasiphaeidae	<i>Leptocheila</i> sp.	0	0	0	0	0	0
58	Arthropoda	Malacostraca	Pinnotheridae	<i>Xenopthalmus pinnotheroides</i>	0	0	0	1	1	1
59	Arthropoda	Malacostraca	Porcellanidae	<i>Raphidopus ciliatus</i>	0	0	0	0	0	0
60	Arthropoda	Malacostraca	Scalopidiidae	<i>Scalopidia spinosipes</i>	0	0	0	0	0	0
61	Arthropoda	Malacostraca	Anthuridae	<i>Cyathura</i> sp.	0	0	0	0	6	4
62	Arthropoda	Malacostraca	Nebaliidae	<i>Nebalia</i> sp.	0	1	0	1	0	0
63	Arthropoda	Malacostraca	Squillidae	<i>Miyakella nepa</i>	0	0	0	0	0	0
64	Chordata	Actinopterygii	Gobiidae	<i>Ctenogobius brevirostris</i>	0	0	0	0	0	0
65	Cnidaria	Anthozoa	Virgulariidae	<i>Virgularia</i> sp.	0	0	1	1	0	0
66	Echinodermata	Ophiuroidea		<i>Ophiuroidea</i> spp.	7	1	10	11	20	5
67	Mollusca	Bivalvia	Mytilidae	<i>Modiolatus plicatus</i>	0	0	0	0	0	0
68	Mollusca	Bivalvia	Nuculanidae	<i>Sacella cuspidata</i>	0	0	0	1	0	1
69	Mollusca	Bivalvia	Solenidae	<i>Solen dunkerianus</i>	0	0	0	0	0	0
70	Mollusca	Bivalvia	Tellinidae	<i>Nitidotellina</i> sp.	1	0	0	0	0	0
71	Mollusca	Bivalvia	Tellinidae	<i>Tellina iridella</i>	0	0	0	0	0	0
72	Mollusca	Bivalvia	Tellinidae	<i>Tellina</i> sp.	0	0	0	0	0	0
73	Mollusca	Bivalvia	Ungulinidae	<i>Diplodonta sowerbyi</i>	0	0	0	0	1	0
74	Nemertea	--	--	<i>Nemertea</i> spp.	1	4	3	1	3	8
75	Platyhelminthes	--	--	<i>Platyhelminthes</i> spp.	0	0	0	0	0	0
76	Sipuncula	Phascolosomatidea	Phascolosomatidae	<i>Apionsoma trichocephalus</i>	2	1	3	0	1	1
77	Sipuncula	Sipunculidea	Sipunculidae	<i>Sipunculus nudus</i>	0	0	0	0	0	0

Dry Season

					30/12/2019					
Monitoring Date					S1		S2		R1	
Monitoring Location					Replicate 1	Replicate 2	Replicate 1	Replicate 2	Replicate 1	Replicate 2
#	Phylum	Class	Family	Species						
1	Annelida	Polychaeta	Amphinomidae	<i>Linopherus paucibranchiata</i>	0	1	1	0	0	0
2	Annelida	Polychaeta	Thalassematidae	<i>Anelassorhynchus sabinus</i>	0	0	0	0	0	0
3	Annelida	Polychaeta	Dorvilleidae	<i>Schistomeringos rudolphi</i>	0	0	0	0	0	0
4	Annelida	Polychaeta	Eunicidae	<i>Lysidice ninetta</i>	0	0	0	0	0	0
5	Annelida	Polychaeta	Eunicidae	<i>Marphysa stragulum</i>	0	1	0	0	0	0
6	Annelida	Polychaeta	Lumbrineridae	<i>Lumbrineris shiinoi</i>	0	0	0	0	1	1
7	Annelida	Polychaeta	Onuphidae	<i>Onuphis eremita</i>	0	0	0	0	0	0
8	Annelida	Polychaeta	Chrysopetalidae	<i>Bhavanina brevis</i>	1	0	0	0	1	1
9	Annelida	Polychaeta	Glyceridae	<i>Glycera alba</i>	0	1	0	1	3	1
10	Annelida	Polychaeta	Goniadidae	<i>Glycinde gurjanovae</i>	1	2	1	0	0	0
11	Annelida	Polychaeta	Hesionidae	<i>Ophiodromus angustifrons</i>	0	0	0	0	1	2
12	Annelida	Polychaeta	Lacydoniidae	<i>Paralacydonia paradox</i>	0	0	0	0	1	1
13	Annelida	Polychaeta	Nephtyidae	<i>Aglaothamum dibranchis</i>	2	0	1	0	3	4
14	Annelida	Polychaeta	Nereididae	<i>Leonnates persica</i>	0	0	0	0	0	0
15	Annelida	Polychaeta	Nereididae	<i>Leonnates</i> sp.	0	0	0	0	1	0
16	Annelida	Polychaeta	Phyllodocidae	<i>Eteone</i> sp.	0	2	0	0	0	1
17	Annelida	Polychaeta	Pilargidae	<i>Otopsis</i> sp.	0	1	0	0	0	0
18	Annelida	Polychaeta	Pilargidae	<i>Sigambra hanaokai</i>	2	0	0	1	2	0
19	Annelida	Polychaeta	Polynoidea	<i>Harmothoe</i> sp.	0	0	0	0	1	0
20	Annelida	Polychaeta	Syllidae	<i>Syllis</i> sp.	0	0	0	0	0	0
21	Annelida	Polychaeta	Oweniidae	<i>Owenia fusiformis</i>	0	0	0	0	0	0
22	Annelida	Polychaeta	Magelonidae	<i>Magelona</i> sp.	1	0	2	1	6	11
23	Annelida	Polychaeta	Poecilochaetidae	<i>Poecilochaetus</i> sp.	0	0	0	0	3	1
24	Annelida	Polychaeta	Spionidae	<i>Aonides oxycephala</i>	0	0	0	0	1	1
25	Annelida	Polychaeta	Spionidae	<i>Laonice cirrata</i>	1	2	0	0	4	4
26	Annelida	Polychaeta	Spionidae	<i>Prionospio malmgreni</i>	0	3	1	0	12	8
27	Annelida	Polychaeta	Spionidae	<i>Prionospio</i> sp.	0	0	0	0	0	0
28	Annelida	Polychaeta	Spionidae	<i>Scolecopsis</i> sp.	0	0	2	0	0	1
29	Annelida	Polychaeta	Ampharetidae	<i>Anobothrus</i> sp.	0	0	0	0	0	0
30	Annelida	Polychaeta	Cirratulidae	<i>Chaetozone</i> sp.	0	0	0	0	0	0
31	Annelida	Polychaeta	Cirratulidae	<i>Cirratiforma</i> sp.	0	0	0	0	0	2
32	Annelida	Polychaeta	Cirratulidae	<i>Tharyx</i> sp.	0	0	0	0	0	2
33	Annelida	Polychaeta	Pectinariidae	<i>Pectinaria conchilega</i>	0	1	0	0	0	0
34	Annelida	Polychaeta	Sternaspidae	<i>Sternaspis scutata</i>	1	0	0	0	1	1
35	Annelida	Polychaeta	Terebellidae	<i>Amaeana</i> sp.	0	0	0	1	0	0
36	Annelida	Polychaeta	Terebellidae	<i>Pista</i> sp.	0	1	0	0	0	0
37	Annelida	Polychaeta	Trichobranchidae	<i>Terebellides stroemii</i>	0	2	0	0	5	1
38	Annelida	Polychaeta	Trichobranchidae	<i>Trichobranchus</i> sp.	0	0	0	0	0	0
39	Annelida	Polychaeta	Capitellidae	<i>Capitella</i> sp.	0	2	1	0	5	5
40	Annelida	Polychaeta	Capitellidae	<i>Notomastus</i> sp.	1	0	0	1	0	14
41	Annelida	Polychaeta	Cossuridae	<i>Cossura dimorpha</i>	0	0	0	1	0	1
42	Annelida	Polychaeta	Maldanidae	Maldanidae spp.	1	2	1	0	6	10
43	Annelida	Polychaeta	Opheliidae	<i>Ophelia acuminata</i>	0	1	0	0	0	0
44	Annelida	Polychaeta	Orbiniidae	<i>Phylo ornatus</i>	0	0	0	0	0	0
45	Annelida	Polychaeta	Paraonidae	<i>Aricidea</i> sp.	0	1	0	0	5	4
46	Annelida	Polychaeta	Paraonidae	<i>Cirrophorus miyakoensis</i>	0	2	0	0	0	0
47	Annelida	Polychaeta	Paraonidae	<i>Paraonis</i> sp.	0	0	0	0	0	0
48	Annelida	Polychaeta	Scalibregmidae	<i>Scalibregma inflatum</i>	0	1	0	0	4	0
49	Arthropoda	Malacostraca	Ampeliscaidae	<i>Ampelisca</i> sp.	0	4	1	0	11	2
50	Arthropoda	Malacostraca	Corophiidae	<i>Corophium</i> sp.	0	0	0	0	3	3
51	Arthropoda	Malacostraca	Maeridae	<i>Ceradocus</i> sp.	0	0	0	0	2	1
52	Arthropoda	Malacostraca	Bodotriidae	<i>Eocuma</i> sp.	0	0	0	0	2	0
53	Arthropoda	Malacostraca	Alpheidae	<i>Alpheus digitalis</i>	0	0	0	0	2	0
54	Arthropoda	Malacostraca	Alpheidae	<i>Betaeus</i> sp.	0	0	0	0	0	0
55	Arthropoda	Malacostraca	Callinassidae	<i>Nihonotrypaea japonica</i>	0	2	0	1	0	1
56	Arthropoda	Malacostraca	Goneplacidae	<i>Typhlocarcinops denticarpus</i>	0	0	1	1	1	1
57	Arthropoda	Malacostraca	Pasiphaeidae	<i>Leptocheila</i> sp.	0	0	0	0	0	2
58	Arthropoda	Malacostraca	Pinnotheridae	<i>Xenopthalmus pinnotheroides</i>	0	0	0	0	0	2
59	Arthropoda	Malacostraca	Porcellanidae	<i>Raphidopus ciliatus</i>	0	0	0	0	2	1
60	Arthropoda	Malacostraca	Scalopidiidae	<i>Scalopidia spinosipes</i>	1	0	0	0	0	1
61	Arthropoda	Malacostraca	Anthuridae	<i>Cyathura</i> sp.	0	0	0	0	5	3
62	Arthropoda	Malacostraca	Nebaliidae	<i>Nebalia</i> sp.	0	0	0	0	0	0
63	Arthropoda	Malacostraca	Squillidae	<i>Miyakella nepa</i>	0	0	0	0	0	1
64	Chordata	Actinopterygii	Gobiidae	<i>Ctenogobius brevirostris</i>	0	0	0	0	1	0
65	Cnidaria	Anthozoa	Virgulariidae	<i>Virgularia</i> sp.	0	0	0	0	0	0
66	Echinodermata	Ophiuroidea		<i>Ophiuroidea</i> spp.	5	3	4	3	8	11
67	Mollusca	Bivalvia	Mytilidae	<i>Modiolatus plicatus</i>	0	0	0	0	0	1
68	Mollusca	Bivalvia	Nuculanidae	<i>Sacella cuspidata</i>	1	0	0	2	0	0
69	Mollusca	Bivalvia	Solenidae	<i>Solen dunkerianus</i>	1	0	0	0	0	0
70	Mollusca	Bivalvia	Tellinidae	<i>Nitidotellina</i> sp.	0	0	0	0	0	0
71	Mollusca	Bivalvia	Tellinidae	<i>Tellina iridella</i>	0	0	1	0	1	0
72	Mollusca	Bivalvia	Tellinidae	<i>Tellina</i> sp.	0	0	2	0	1	0
73	Mollusca	Bivalvia	Ungulinidae	<i>Diplodonta sowerbyi</i>	0	0	0	0	2	2
74	Nemertea	--	--	<i>Nemertea</i> spp.	0	6	3	4	4	7
75	Platyhelminthes	--	--	<i>Platyhelminthes</i> spp.	0	1	0	0	0	0
76	Sipuncula	Phascolosomatidea	Phascolosomatidae	<i>Apionsoma trichocephalus</i>	1	0	1	0	6	4
77	Sipuncula	Sipunculidea	Sipunculidae	<i>Sipunculus nudus</i>	0	0	0	0	1	0

Monitoring Date					27/08/2019					
Monitoring Location					S1		S2		R1	
#	Phylum	Class	Family	Species	Replicate 1	Replicate 2	Replicate 1	Replicate 2	Replicate 1	Replicate 2
1	Annelida	Polychaeta	Amphinomidae	<i>Linopherus paucibranchiata</i>	0.0241	0	0	0	0.0181	0
2	Annelida	Polychaeta	Thalassematidae	<i>Anelassorhynchus sabinus</i>	0	0	0	0	0	0.3011
3	Annelida	Polychaeta	Dorvilleidae	<i>Schistomeringos rudolphi</i>	0.0026	0	0	0.0004	0	0
4	Annelida	Polychaeta	Eunicidae	<i>Lysidice ninetta</i>	0	0	0	0	0.0013	0
5	Annelida	Polychaeta	Eunicidae	<i>Marphysa stragulum</i>	0	0	0	0	0	0
6	Annelida	Polychaeta	Lumbrineridae	<i>Lumbrineris shiinoi</i>	0	0	0.0050	0	0.0031	0.0159
7	Annelida	Polychaeta	Onuphidae	<i>Onuphis eremita</i>	0	0	0	0	0	0.0475
8	Annelida	Polychaeta	Chrysopetalidae	<i>Bhavanina brevis</i>	0.0012	0	0.0004	0	0	0
9	Annelida	Polychaeta	Glyceridae	<i>Glycera alba</i>	0	0	0	0	0.0363	0.0464
10	Annelida	Polychaeta	Goniadidae	<i>Glycinde gurjanovae</i>	0.0054	0	0	0	0	0
11	Annelida	Polychaeta	Hesionidae	<i>Ophiodromus angustifrons</i>	0	0.0106	0.0002	0	0.0042	0.0010
12	Annelida	Polychaeta	Lacydoniidae	<i>Paralacydonia paradox</i>	0	0	0	0	0.0025	0.0032
13	Annelida	Polychaeta	Nephtyidae	<i>Aglaothamum dibranichis</i>	0.0218	0.0113	0.0049	0.0092	0.0006	0.0052
14	Annelida	Polychaeta	Nereididae	<i>Leonnates persica</i>	0.0001	0	0	0	0	0
15	Annelida	Polychaeta	Nereididae	<i>Leonnates</i> sp.	0	0	0	0	0	0
16	Annelida	Polychaeta	Phyllodocidae	<i>Eteone</i> sp.	0	0	0	0	0.0006	0
17	Annelida	Polychaeta	Pilargidae	<i>Otopsis</i> sp.	0	0.0007	0	0	0.0009	0.0010
18	Annelida	Polychaeta	Pilargidae	<i>Sigambra hanaokai</i>	0.0012	0.0007	0.0001	0.0007	0.0017	0.0020
19	Annelida	Polychaeta	Polynoidea	<i>Harmothoe</i> sp.	0	0	0.0036	0	0.0035	0.0851
20	Annelida	Polychaeta	Syllidae	<i>Syllis</i> sp.	0	0	0	0	0.0005	0.0009
21	Annelida	Polychaeta	Oweniidae	<i>Owenia fusiformis</i>	0	0	0	0	0.0031	0
22	Annelida	Polychaeta	Mageloniidae	<i>Magelona</i> sp.	0.0042	0.0018	0.0009	0.0017	0.0022	0.0048
23	Annelida	Polychaeta	Poecilochaetidae	<i>Poecilochaetus</i> sp.	0	0	0	0.0027	0	0
24	Annelida	Polychaeta	Spionidae	<i>Aonides oxycephala</i>	0	0	0	0	0	0
25	Annelida	Polychaeta	Spionidae	<i>Laonice cirrata</i>	0.0003	0.0246	0	0.0007	0.1689	0.0575
26	Annelida	Polychaeta	Spionidae	<i>Prionospio malmgreni</i>	0	0	0	0	0	0
27	Annelida	Polychaeta	Spionidae	<i>Prionospio</i> sp.	0.0005	0.0017	0.0009	0.0004	0.0300	0.0165
28	Annelida	Polychaeta	Spionidae	<i>Scolecopsis</i> sp.	0.0014	0.0008	0.0003	0.0010	0.0062	0.0068
29	Annelida	Polychaeta	Ampharetidae	<i>Anobothrus</i> sp.	0.0002	0.0007	0.0003	0	0.0001	0.0005
30	Annelida	Polychaeta	Cirratulidae	<i>Chaetozone</i> sp.	0	0	0	0	0.0078	0
31	Annelida	Polychaeta	Cirratulidae	<i>Cirratiforma</i> sp.	0.0002	0.0005	0.0008	0	0	0.0004
32	Annelida	Polychaeta	Cirratulidae	<i>Tharyx</i> sp.	0	0.0212	0	0	0.0003	0.0024
33	Annelida	Polychaeta	Pectinariidae	<i>Pectinaria conchilega</i>	0	0	0	0.0185	0	0.0001
34	Annelida	Polychaeta	Sternaspidae	<i>Sternaspis scutata</i>	0	0.0135	0	0.0219	0.0333	0
35	Annelida	Polychaeta	Terebellidae	<i>Amaeana</i> sp.	0	0	0	0	0	0
36	Annelida	Polychaeta	Terebellidae	<i>Pista</i> sp.	0.0917	0.0134	0	0	0.1886	0.0067
37	Annelida	Polychaeta	Trichobranchidae	<i>Terebellides stroemii</i>	0	0	0	0	0.0745	0.0750
38	Annelida	Polychaeta	Trichobranchidae	<i>Trichobranchus</i> sp.	0	0	0	0	0	0.0048
39	Annelida	Polychaeta	Capitellidae	<i>Capitella</i> sp.	0.0002	0.0031	0.0001	0	0.0244	0.0019
40	Annelida	Polychaeta	Capitellidae	<i>Notomastus</i> sp.	0	0	0	0.0010	0.0582	0.0255
41	Annelida	Polychaeta	Cossuridae	<i>Cossura dimorpha</i>	0.0024	0.0013	0	0	0.0005	0
42	Annelida	Polychaeta	Maldanidae	Maldanidae spp.	0	0.0202	0.0029	0	0.1819	0.0938
43	Annelida	Polychaeta	Opheliidae	<i>Ophelia acuminata</i>	0	0.0346	0	0.0015	0.0505	0.0239
44	Annelida	Polychaeta	Orbiniidae	<i>Phylo ornatus</i>	0	0.0095	0	0	0.0045	0.0001
45	Annelida	Polychaeta	Paraonidae	<i>Aricidea</i> sp.	0	0	0	0	0	0.0028
46	Annelida	Polychaeta	Paraonidae	<i>Cirrophorus miyakoensis</i>	0	0	0	0	0	0.0002
47	Annelida	Polychaeta	Paraonidae	<i>Paraonis</i> sp.	0.0001	0	0	0	0	0
48	Annelida	Polychaeta	Scalibregmidae	<i>Scalibregma inflatum</i>	0	0	0	0	0.0012	0.0023
49	Arthropoda	Malacostraca	Ampeliscidae	<i>Ampelisca</i> sp.	0.0003	0.0012	0	0	0.0003	0.0023
50	Arthropoda	Malacostraca	Corophiidae	<i>Corophium</i> sp.	0	0.0012	0	0	0.0012	0
51	Arthropoda	Malacostraca	Maeridae	<i>Ceradocus</i> sp.	0	0	0	0.0007	0.0010	0.0012
52	Arthropoda	Malacostraca	Bodotriidae	<i>Eocuma</i> sp.	0	0	0	0	0	0
53	Arthropoda	Malacostraca	Alpheidae	<i>Alpheus digitalis</i>	0	0	0	0	0	0
54	Arthropoda	Malacostraca	Alpheidae	<i>Betaeus</i> sp.	0	0	0	0.1824	0	0
55	Arthropoda	Malacostraca	Callinassidae	<i>Nihonotrypaea japonica</i>	0.0030	0	0	0.0174	0.0087	0.0029
56	Arthropoda	Malacostraca	Goneplacidae	<i>Typhlocarcinops denticarpus</i>	0	0.0539	0	0	0	0
57	Arthropoda	Malacostraca	Pasiphaeidae	<i>Leptocheila</i> sp.	0	0	0	0	0	0
58	Arthropoda	Malacostraca	Pinnotheridae	<i>Xenopthalmus pinnotheroides</i>	0	0	0	0.0729	0.1491	0.0312
59	Arthropoda	Malacostraca	Porcellanidae	<i>Raphidopus ciliatus</i>	0	0	0	0	0	0
60	Arthropoda	Malacostraca	Scalopidiidae	<i>Scalopidia spinosipes</i>	0	0	0	0	0	0
61	Arthropoda	Malacostraca	Anthuridae	<i>Cyathura</i> sp.	0	0	0	0	0.0047	0.0006
62	Arthropoda	Malacostraca	Nebaliidae	<i>Nebalia</i> sp.	0	0.0003	0	0.0002	0	0
63	Arthropoda	Malacostraca	Squillidae	<i>Miyakella nepa</i>	0	0	0	0	0	0
64	Chordata	Actinopterygii	Gobiidae	<i>Ctenogobius brevirostris</i>	0	0	0	0	0	0
65	Cnidaria	Anthozoa	Virgulariidae	<i>Virgularia</i> sp.	0	0	0.0009	0.0003	0	0
66	Echinodermata	Ophiuroidea		<i>Ophiuroidea</i> spp.	0.0053	0.0029	0.0119	0.0423	0.1115	0.0650
67	Mollusca	Bivalvia	Mytilidae	<i>Modiolatus plicatus</i>	0	0	0	0	0	0
68	Mollusca	Bivalvia	Nuculanidae	<i>Sacella cuspidata</i>	0	0	0	0.0126	0	0.0341
69	Mollusca	Bivalvia	Solenidae	<i>Solen dunkerianus</i>	0	0	0	0	0	0
70	Mollusca	Bivalvia	Tellinidae	<i>Nitidotellina</i> sp.	0.2707	0	0	0	0	0
71	Mollusca	Bivalvia	Tellinidae	<i>Tellina iridella</i>	0	0	0	0	0	0
72	Mollusca	Bivalvia	Tellinidae	<i>Tellina</i> sp.	0	0	0	0	0	0
73	Mollusca	Bivalvia	Ungulinidae	<i>Diplodonta sowerbyi</i>	0	0	0	0	0.1441	0
74	Nemertea	--	--	<i>Nemertea</i> spp.	0.0036	0.0049	0.0489	0.0016	0.0101	0.0204
75	Platyhelminthes	--	--	<i>Platyhelminthes</i> spp.	0	0	0	0	0	0
76	Sipuncula	Phascosomatidae	Phascosomatidae	<i>Apionsoma trichocephalus</i>	0.0013	0.0012	0.0011	0	0.0012	0.0013
77	Sipuncula	Sipunculidea	Sipunculidae	<i>Sipunculus nudus</i>	0	0	0	0	0	0

Dry Season

Monitoring Date					30/12/2019					
Monitoring Location					S1		S2		R1	
#	Phylum	Class	Family	Species	Replicate 1	Replicate 2	Replicate 1	Replicate 2	Replicate 1	Replicate 2
1	Annelida	Polychaeta	Amphinomidae	<i>Linopherus paucibranchiata</i>	0	0.0041	0.0010	0.0475	0	0
2	Annelida	Polychaeta	Thalassematidae	<i>Anelassorhynchus sabinus</i>	0	0	0	0	0	0
3	Annelida	Polychaeta	Dorvilleidae	<i>Schistomeringos rudolphi</i>	0	0	0	0	0	0
4	Annelida	Polychaeta	Eunicidae	<i>Lysidice ninetta</i>	0	0	0	0	0	0
5	Annelida	Polychaeta	Eunicidae	<i>Marphysa stragulum</i>	0	0.0046	0	0	0	0
6	Annelida	Polychaeta	Lumbrineridae	<i>Lumbrineris shinoi</i>	0	0	0	0	0.0118	0.0004
7	Annelida	Polychaeta	Onuphidae	<i>Onuphis eremita</i>	0	0	0	0	0	0
8	Annelida	Polychaeta	Chrysopetalidae	<i>Bhavana brevis</i>	0.0005	0	0	0	0.0001	0.0010
9	Annelida	Polychaeta	Glyceridae	<i>Glycera alba</i>	0	0.0494	0	0.0342	0.0220	0.0193
10	Annelida	Polychaeta	Goniadidae	<i>Glycine gurjanovae</i>	0.0012	0.0068	0.0003	0	0	0
11	Annelida	Polychaeta	Hesionidae	<i>Ophiodromus angustifrons</i>	0	0	0	0	0.0008	0.0015
12	Annelida	Polychaeta	Lacydoniidae	<i>Paralacydonia paradox</i>	0	0	0	0	0.0003	0.0001
13	Annelida	Polychaeta	Nephtyidae	<i>Aglaphomus dibranchis</i>	0.0109	0	0.0003	0	0.0060	0.0131
14	Annelida	Polychaeta	Nereididae	<i>Leonnates persica</i>	0	0	0	0	0	0
15	Annelida	Polychaeta	Nereididae	<i>Leonnates</i> sp.	0	0	0	0	0.0007	0
16	Annelida	Polychaeta	Phyllodocidae	<i>Eteone</i> sp.	0	0.0067	0	0	0	0.0001
17	Annelida	Polychaeta	Pilargidae	<i>Otopsis</i> sp.	0	0.0004	0	0	0	0
18	Annelida	Polychaeta	Pilargidae	<i>Sigambra hanaokai</i>	0.0008	0	0	0.0002	0.0006	0
19	Annelida	Polychaeta	Polynoidea	<i>Harmothoe</i> sp.	0	0	0	0	0.0045	0
20	Annelida	Polychaeta	Syllidae	<i>Syllis</i> sp.	0	0	0	0	0	0
21	Annelida	Polychaeta	Oweniidae	<i>Owenia fusiformis</i>	0	0	0	0	0	0
22	Annelida	Polychaeta	Magelonidae	<i>Magelona</i> sp.	0.0005	0	0.0008	0.0005	0.0018	0.0043
23	Annelida	Polychaeta	Poecilochaetidae	<i>Poecilochaetus</i> sp.	0	0	0	0	0.0022	0.0014
24	Annelida	Polychaeta	Spionidae	<i>Aonides oxycephala</i>	0	0	0	0	0.0005	0.0002
25	Annelida	Polychaeta	Spionidae	<i>Laonice cirrata</i>	0.0176	0.2085	0	0	0.0533	0.0557
26	Annelida	Polychaeta	Spionidae	<i>Prionospio malmgreni</i>	0	0.0015	0.0005	0	0.0098	0.0109
27	Annelida	Polychaeta	Spionidae	<i>Prionospio</i> sp.	0	0	0	0	0	0
28	Annelida	Polychaeta	Spionidae	<i>Scolecopsis</i> sp.	0	0	0.0026	0	0	0.0005
29	Annelida	Polychaeta	Ampharetidae	<i>Anobothrus</i> sp.	0	0	0	0	0	0
30	Annelida	Polychaeta	Cirratulidae	<i>Chaetozone</i> sp.	0	0	0	0	0	0
31	Annelida	Polychaeta	Cirratulidae	<i>Cirratiforma</i> sp.	0	0	0	0	0	0.0008
32	Annelida	Polychaeta	Cirratulidae	<i>Tharyx</i> sp.	0	0	0	0	0	0.0058
33	Annelida	Polychaeta	Pectinariidae	<i>Pectinaria conchilega</i>	0	0.0039	0	0	0	0
34	Annelida	Polychaeta	Sternaspidae	<i>Sternaspis scutata</i>	0.0009	0	0	0	0.0081	0.0006
35	Annelida	Polychaeta	Terebellidae	<i>Amaeana</i> sp.	0	0	0	0.0009	0	0
36	Annelida	Polychaeta	Terebellidae	<i>Pista</i> sp.	0	0.6923	0	0	0	0
37	Annelida	Polychaeta	Trichobranchidae	<i>Terebellides stroemii</i>	0	0.0092	0	0	0.0287	0.0121
38	Annelida	Polychaeta	Trichobranchidae	<i>Trichobranchis</i> sp.	0	0	0	0	0	0
39	Annelida	Polychaeta	Capitellidae	<i>Capitella</i> sp.	0	0.0005	0.0006	0	0.0045	0.0101
40	Annelida	Polychaeta	Capitellidae	<i>Notomastus</i> sp.	0.0016	0	0	0.0006	0	0.0260
41	Annelida	Polychaeta	Cossuridae	<i>Cossura dimorpha</i>	0	0	0	0.0030	0	0.0003
42	Annelida	Polychaeta	Maldanidae	Maldanidae spp.	0.0003	0.0041	0.0050	0	0.0069	0.0200
43	Annelida	Polychaeta	Opheliidae	<i>Ophelia acuminata</i>	0	0.0447	0	0	0	0
44	Annelida	Polychaeta	Orbiniidae	<i>Phylo ornatus</i>	0	0	0	0	0	0
45	Annelida	Polychaeta	Paraonidae	<i>Aricidea</i> sp.	0	0.0113	0	0	0.0111	0.0022
46	Annelida	Polychaeta	Paraonidae	<i>Cirrophorus miyakoensis</i>	0	0.0007	0	0	0	0
47	Annelida	Polychaeta	Paraonidae	<i>Paraonis</i> sp.	0	0	0	0	0	0
48	Annelida	Polychaeta	Scalibregmidae	<i>Scalibregma inflatum</i>	0	0.0007	0	0	0.0061	0
49	Arthropoda	Malacostraca	Ampeliscidae	<i>Ampelisca</i> sp.	0	0.0001	0.0001	0	0.0030	0.0009
50	Arthropoda	Malacostraca	Corophiidae	<i>Corophium</i> sp.	0	0	0	0	0.0018	0.0011
51	Arthropoda	Malacostraca	Maeridae	<i>Ceradocus</i> sp.	0	0	0	0	0.0001	0.0003
52	Arthropoda	Malacostraca	Bodotriidae	<i>Eocuma</i> sp.	0	0	0	0	0.0008	0
53	Arthropoda	Malacostraca	Alpheidae	<i>Alpheus digitalis</i>	0	0	0	0	0.6893	0
54	Arthropoda	Malacostraca	Alpheidae	<i>Betaeus</i> sp.	0	0	0	0	0	0
55	Arthropoda	Malacostraca	Callinassidae	<i>Nihonotrypaea japonica</i>	0	0.0149	0	0.0090	0	0.0052
56	Arthropoda	Malacostraca	Goneplacidae	<i>Typhlocarcinops denticarpus</i>	0	0	0.0796	0.0963	0.0822	0.0059
57	Arthropoda	Malacostraca	Pasiphaeidae	<i>Leptochela</i> sp.	0	0	0	0	0	0.0196
58	Arthropoda	Malacostraca	Pinnotheridae	<i>Xenopthalmus pinnotheroides</i>	0	0	0	0	0	0.1967
59	Arthropoda	Malacostraca	Porcellanidae	<i>Raphidopus ciliatus</i>	0	0	0	0	0.8372	0.3307
60	Arthropoda	Malacostraca	Scalopidiidae	<i>Scalopidia spinosipes</i>	0.0166	0	0	0	0	0.0403
61	Arthropoda	Malacostraca	Anthuridae	<i>Cyathura</i> sp.	0	0	0	0	0.0024	0.0027
62	Arthropoda	Malacostraca	Nebaliidae	<i>Nebalia</i> sp.	0	0	0	0	0	0
63	Arthropoda	Malacostraca	Squillidae	<i>Miyakella nepa</i>	0	0	0	0	0	9.1403
64	Chordata	Actinopterygii	Gobiidae	<i>Ctenogobius brevirostris</i>	0	0	0	0	0.7782	0
65	Cnidaria	Anthozoa	Virgulariidae	<i>Virgularia</i> sp.	0	0	0	0	0	0
66	Echinodermata	Ophiuroidea	Ophiuroidea spp.	Ophiuroidea spp.	0.0044	0.0028	0.0076	0.0478	0.0461	0.1791
67	Mollusca	Bivalvia	Mytilidae	<i>Modiolatus plicatus</i>	0	0	0	0	0	0.2115
68	Mollusca	Bivalvia	Nuculanidae	<i>Sacella cuspidata</i>	0.0136	0	0	0.0664	0	0
69	Mollusca	Bivalvia	Solenidae	<i>Solen dunkerianus</i>	0.0106	0	0	0	0	0
70	Mollusca	Bivalvia	Tellinidae	<i>Nitidotellina</i> sp.	0	0	0	0	0	0
71	Mollusca	Bivalvia	Tellinidae	<i>Tellina iridella</i>	0	0	0.0420	0	0.2642	0
72	Mollusca	Bivalvia	Tellinidae	<i>Tellina</i> sp.	0	0	0.0356	0	0.0028	0
73	Mollusca	Bivalvia	Ungulinidae	<i>Diplodonta sowerbyi</i>	0	0	0	0	0.1473	0.0076
74	Nemertea	--	--	<i>Nemertea</i> spp.	0	0.0023	0.1281	0.0015	0.1113	0.0624
75	Platyhelminthes	--	--	Platyhelminthes spp.	0	0.0018	0	0	0	0
76	Sipuncula	Phascolosomatidea	Phascolosomatidae	<i>Apionsoma trichocephalus</i>	0.0005	0	0.0005	0	0.0744	0.0015
77	Sipuncula	Sipunculidea	Sipunculidae	<i>Sipunculus nudus</i>	0	0	0	0	0.0041	0