

## APPENDIX 5.1 BASELINE MARINE ECOLOGICAL RESOURCES

### ***Methodology***

A5.1 Grab sampling of seabed sediment was employed to survey marine soft bottom benthic fauna. Sampling locations were surveyed within and around the proposed works areas so that to collect sufficient baseline benthos data for impact assessment on both direct and indirect impact to existing benthic fauna groups arising from the Project. The locations of the benthos survey are illustrated in **Figure Nos. NEX2213/C/331/ENS/M51/003 and NEX2213/C/331/ENS/M51/011**, which included:

- Mid Victoria Harbour (VHR, 5 sampling locations)
- Causeway Bay Typhoon Shelter, southeast corner (CBTS, 2 sampling locations)
- Shek O (SKO, 4 sampling locations)

A5.2 At every sampling point, three replicates of sediment samples were collected using a 0.1 m<sup>2</sup> van Veen grab. Collected samples were accepted when at least two-third of grab volume was filled. The samples were washed with gentle seawater through a wooden box of sieve with 0.5 mm mesh size. Large animals that were visible from the residues were hand-picked into a small plastic vial. All remains were washed and transferred into a plastic container followed by preservation with 70% ethanol solution and staining with 1% Rose Bengal.

### Laboratory work

A5.3 After arrival to laboratory, the samples were stored for one day to ensure sufficient preservation and staining. The animals collected were sorted out from the sediment residues. For quality assurance, the sediment residues of one-third sorted samples were randomly rechecked. No missed specimen was found in the recheck.

A5.4 The collected specimens were identified to the lowest taxonomic resolution by a trained technician. Examination of the morphological features of the specimens was undertaken with the aid of both stereoscopic and compound microscopes. The taxonomic classification was conducted in accordance to the following references: Polychaetes: Day (1967), Gallardo (1967), Fauchald (1977), Yang and Sun (1988), Wu et al. (1997), Sun (2004); Crustaceans: Dai and Yang (1991), Dong (1991); Mollusks: Qi (2004). The number of individuals of each species was recorded by counting the anterior portions of the fauna only. Total biomass of each species was determined as preserved wet weight, after blotting the animals on filter paper for 3 minutes before weighing to the nearest 0.0001g.

### Data analysis

A5.5 Data collected from three replicate samples at every sampling point were pooled together for data analysis. Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) were calculated using the formulae below:

$$H' = -\sum (N_i / N) \ln (N_i / N) \text{ (Shannon and Weaver, 1963)}$$

$$J = H' / \ln S, \text{ (Pielou, 1966)}$$

where S is the total number of species in the sample, N is the total number of individuals, and  $N_i$  is the number of individuals of the  $i^{\text{th}}$  species.

### ***Survey Results***

#### Sampling Sites

A5.6 **Table 1** lists the GPS locations of all sampling sites.

**Table 1 GPS coordinates of the sampling sites (in WGS84 datum (ITRF96 Reference Frame))**

Sampling site	Latitude (N)	Longitude (E)
VHR-B1	22° 17.919'	114° 10.906'
VHR-B2	22° 17.481'	114° 10.993'
VHR-B3	22° 17.073'	114° 11.060'
VHR-B4	22° 17.659'	114° 10.865'
VHR-B5	22° 17.287'	114° 11.100'
CBTS-B1	22° 17.124'	114° 11.364'
CBTS-B2	22° 17.155'	114° 11.308'
SKO-B1	22° 13.206'	114° 14.265'
SKO-B2	22° 13.180'	114° 14.141'
SKO-B3	22° 13.104'	114° 14.338'
SKO-B4	22° 13.030'	114° 14.383'

- A5.7 The texture of grabbed sediment at every sampling point is listed in **Table 2**.
- A5.8 Sampling sites VHR-B1 to VHR-B5 were located along the SCL cross harbour tunnel and its vicinity. The substratum at VHR-B1 was very coarse sand consisted of ~20% silt-clay fraction (particle diameter <64µm) and ~80% coarse materials. The coarse materials included gravels, coarse sand and broken shells of mollusks and crustaceans. VHR-B2 was sandy substratum consisted of ~70% silt-clay fraction and ~30% coarse materials. Sediments at sampling points VHR-B3, VHR-B4 and VHR-B5 were muddy with ~85% silt-clay fraction and ~15% coarse materials. The sediments at all sampling points were black in colour with mild smell of hydrogen sulphite especially at VHR-B3. The sediment at VHR-B3 was deep black in colour and released a pungent smell of hydrogen sulphite.
- A5.9 All sampling sites at southeast corner of Causeway Bay Typhoon Shelter (CBTS-B1 and CBTS-B2) were fine mud (~85% silt-clay fraction (particle diameter <64µm)) with abundant garbage. The sediments were deep black in colour and released a pungent smell of hydrogen sulphite. Large quantity of leaf litter was found at CBTS-B1 while the dense vegetation at nearby shore was a potential source.
- A5.10 Sampling sites SKO-B1 to SKO-B4 were situated near Shek O Quarry. The sediments were grey, fine mud at SKO-B1 and SKO-B2. It consisted of about 90% silt-clay fraction (particle diameter <64 µm) and 10% coarse materials. The coarse materials included gravels and broken shells of mollusks and crustaceans. At SKO-B3 and SKO-B4, the sediments were brown, fine sand. It consisted of about 75% fine sand fraction (particle diameter 125-500 µm) and 25% coarse materials. No special odour was noticed at all sampling sites in both seasons of sampling.

**Table 2 Sediment Texture and Colour at Each Sampling Site**

Sampling site	Major particle size fraction <sup>(1)</sup>	Sediment colour	Level of sulphite smell	Remark
VHR-B1	~20% silt-clay ~80% coarse material	Black	Nil	\
VHR-B2	~70% silt-clay ~30% coarse material	Black	Nil	\
VHR-B3	~85% silt-clay ~15% coarse material	Black	Pungent	\
VHR-B4	~85% silt-clay ~15% coarse material	Black	Nil	\
VHR-B5	~85% silt-clay ~15% coarse material	Black	Nil	\
CBTS-B1	~85% silt-clay	Deep black	Pungent	Large quantity of garbage and leaf litter
CBTS-B2	~85% silt-clay	Deep black	Pungent	Large quantity of garbage
SKO-B1	~90% silt-clay ~10% coarse material	Grey	Nil	\

Sampling site	Major particle size fraction <sup>(1)</sup>	Sediment colour	Level of sulphite smell	Remark
SKO-B2	~90% silt-clay ~10% coarse material	Grey	Nil	\
SKO-B3	~75% fine sand ~25% coarse material	Brown	Nil	\
SKO-B4	~75% fine sand ~25% coarse material	Brown	Nil	\

Note:

(1) Silt Clay – particle diameter of <64 µm; fine sand – particle diameter of 125-500 µm; coarse material – particle diameter of >2000µm, include gravels, coarse sand and broken shells of molluscs and crustacean.

### Mid Victoria Harbour

A5.11 **Table 3** lists the total abundance and total biomass of every faunal group. A total of 1359 and 919 specimens were collected in dry and wet seasons respectively. Totally 73 of 77 taxa were identified to genus or species levels. The most diverse phylum was polychaetes (52 species) followed by 10 species of crustaceans, 7 species of mollusks, 3 species of fishes, 1 species of echiuran and 1 species of cnidarian. Amphipods, isopods and nemerteans were classified into 3 general taxa due to limited taxonomic references. In dry season, 70%, 29%, 1% of specimens were polychaetes, crustaceans and other phyla respectively. The total biomass was 54.97g, in which 72%, 23%, 4% and 1% of total biomass were accounted by mollusks, crustaceans, polychaetes and other phyla respectively. No fauna was collected at VHR-B3. In wet season, 80%, 12%, 7%, 1% of specimens were polychaetes, mollusks, crustaceans and other phyla respectively. The total biomass was 129.12g, in which 95%, 3%, and 2% of total biomass were accounted by mollusks, polychaetes and other phyla respectively.

**Table 3 Total Abundance and Biomass of Faunal Group Sampled at Mid Victoria Harbour in Wet and Dry Seasons**

Faunal group	Total individual	% <sup>(1)</sup>	Total biomass (g)	% <sup>(1)</sup>
<b>Wet season</b>				
Polychaeta	734	80	3.4846	3
Mollusca	108	12	123.1319	95
Crustacea	62	7	0.6042	0
Nemertea	9	1	0.0294	0
Echiura	4	0	1.4986	1
Cnidaria	1	0	0.0361	0
Fish	1	0	0.3396	0
<b>Total</b>	<b>919</b>		<b>129.1244</b>	
<b>Dry season</b>				
Polychaeta	953	70	2.3814	4
Crustacea	391	29	12.431	23
Mollusca	12	1	39.7337	72
Fish	2	0	0.4198	1
Nemertea	1	0	0.008	0
<b>Total</b>	<b>1359</b>		<b>54.9739</b>	

Notes :

(1) 0 %: Total individual / biomass of the faunal group is less than 1% of that of all specimens.

A5.12 **Table 4** shows the percent proportion of each faunal group (in total abundance) at all sampling points. In wet season, polychaete was the major abundant group at all sampling points (51-100%). The less abundant groups were mollusks and crustaceans that accounted for 10-40% of total abundance. In dry season, polychaetes and crustaceans were the abundant groups at all sampling points that both faunal groups accounted for more than 92% of total abundance. At VHR-B1, VHR-B4 and VHR-B5, polychaetes were more abundant than crustaceans, and vice versa at VHR-B2. Other phyla accounted for less than 10% of total abundance in both seasons of sampling.

**Table 4 The Percent Proportion of Faunal Groups (in total abundance) at Every Sampling Point at Mid Victoria Harbour in Wet and Dry Seasons**

% Proportion of faunal group <sup>(1)</sup>	VHR-B1	VHR-B2	VHR-B3	VHR-B4	VHR-B5
<b>Wet season</b>					
Polychaeta	82	51	100	79	88
Mollusca	11	22		10	4
Crustacea	6	18			8
Nemertea	1	2		10	
Cnidaria	0				
Echiura		5			
Fish		1			
<b>Dry season</b>					
Polychaeta	82	30	N.A.	86	93
Crustacea	17	69		12	
Mollusca	1				7
Nemertea	0				
Fish		0		2	

Notes :

(1) 0 %: Percentage proportion of the faunal group is less than 1% of that of all specimens.

A5.13 **Table 5** shows the total number of species, total abundance, total biomass,  $H'$ ,  $J$  at every sampling point. The biological parameters varied strongly among the five sampling points while seasonal variation was relatively less. Regardless of seasons, the total number of species (mean 37 spp.  $0.3\text{m}^{-2}$ ) and total abundance (mean 2870 ind.  $\text{m}^{-2}$ ) at VHR-B1 were significantly higher than other sampling points. The number of species (mean 25 spp.  $0.3\text{m}^{-2}$ ) and total abundance (mean 680 ind.  $\text{m}^{-2}$ ) at VHR-B2 were moderate. VHR-B4 was moderate in total number of species (mean 16 spp.  $0.3\text{m}^{-2}$ ) but low in total abundance (mean 132 ind.  $\text{m}^{-2}$ ). VHR-B5 was low in total number of species (mean 8 spp.  $0.3\text{m}^{-2}$ ) and total abundance (mean 89 ind.  $\text{m}^{-2}$ ). In terms of total biomass, PT01 (mean 257 g  $\text{m}^{-2}$ ) was significantly higher than other sampling points (mean 12 g  $\text{m}^{-2}$ ) especially in wet season.

A5.14 At VHR-B1 and VHR-B4, the  $H'$  (mean 2.4 at VHR-B1; 2.4 at VHR-B4) and  $J$  (mean 0.7 at VHR-B1; 0.9 at VHR-B4) were moderate and similar between two seasons of sampling. Due to the seasonal changes of total number of species, significant increases of  $H'$  and  $J$  were observed at VHR-B2 and VHR-B5 from dry season to wet season. The  $H'$  and  $J$  at VHR-B2 increased from 1.2 to 3.2 and from 0.4 to 0.9 respectively. The  $H'$  and  $J$  at VHR-B5 increased from 0.7 to 1.8 and from 0.5 to 0.8 respectively.

A5.15 At VHR-B3, there were only 16 individuals of one polychaete species collected in wet season. The  $H'$  and  $J$  could not be calculated since the formula required at least two species in one sample.

**Table 5 Number of Species, Total Abundance, Total Biomass, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) at Every Sampling Point at Mid Victoria Harbour in Wet and Dry Seasons**

	Season	VHR-B1	VHR-B2	VHR-B3	VHR-B4	VHR-B5
<b>Total number of species (spp. <math>0.3\text{m}^{-2}</math>)</b>	Wet	37	31	1	10	10
	Dry	36	19	N.A.	22	5
<b>Total abundance (ind. <math>\text{m}^{-2}</math>)</b>	Wet	2553	273	53	97	87
	Dry	3187	1087	N.A.	167	90
<b>Total biomass (g <math>\text{m}^{-2}</math>)<sup>(1)</sup></b>	Wet	400	15.9	0	0.4	14
	Dry	114.6	20.2	N.A.	24.3	24.1
<b>Shannon-Weaver Diversity Index <math>H'</math></b>	Wet	2.4	3.2	N.A.	2.1	1.8
	Dry	2.3	1.2	N.A.	2.7	0.7
<b>Pielou's Species</b>	Wet	0.7	0.9	N.A.	0.9	0.8

	Season	VHR-B1	VHR-B2	VHR-B3	VHR-B4	VHR-B5
<b>Evenness J</b>	Dry	0.6	0.4	N.A.	0.9	0.5

Notes :

(1) 0.0 g m<sup>-2</sup>: Total biomass is less than 0.1 g m<sup>-2</sup>

A5.16 **Table 6** lists out the five most abundant species at every sampling point in wet season. VHR-B1 was dominated by polychaetes *Eunice indica* (35%), *Cirriformia* sp. (13%) and bivalve *Ruditapes philipinarum* (10%). At VHR-B2, there was no dominant species since every taxon was low in density and accounted for less than 10% of total abundance. Only polychaete *Capitella* sp. was found at VHR-B3 in moderate density. VHR-B4 was dominated by polychaetes *Tharyx* sp. (24%) and *Sigambra hanaokai* (21%). VHR-B5 was dominated by polychaetes *Sigambra hanaokai* (39%) and *Nectoneanthes alatopalpis* (27%).

**Table 6 Five Most Abundant Species at Every Sampling Point at Mid Victoria Harbour in Wet Season**

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
VHR-B1	P	<i>Eunice indica</i>	893	5.1777	35
	P	<i>Cirriformia</i> sp.	320	0.3877	12.5
	M	<i>Ruditapes philipinarum</i>	257	390.432	10.1
	P	<i>Mediomastus</i> sp.	163	0.103	6.4
	C	Amphipod spp.	133	0.1213	5.2
VHR-B2	C	Amphipod spp.	27	0.045	9.8
	P	<i>Pseudopolydora paucibranchiata</i>	20	0.023	7.3
	M	<i>Anodontia stearnsiana</i>	20	5.6553	7.3
	M	<i>Theora lata</i>	20	0.2247	7.3
	M	<i>Ruditapes philipinarum</i>	17	0.7357	6.1
VHR-B3	P	<i>Capitella</i> sp.	53	0.017	100
VHR-B4	P	<i>Tharyx</i> sp.	23	0.0437	24.1
	P	<i>Sigambra hanaokai</i>	20	0.0253	20.7
	M	<i>Theora lata</i>	10	0.227	10.3
	N	Nemertean spp.	10	0.077	10.3
	P	<i>Pseudopolydora paucibranchiata</i>	7	0.006	6.9
VHR-B5	P	<i>Sigambra hanaokai</i>	33	0.026	38.5
	P	<i>Nectoneanthes alatopalpis</i>	23	0.1373	26.9
	P	<i>Otopsis</i> sp.	7	0.0007	7.7
	P	<i>Mediomastus</i> sp.	3	0.008	3.8
	P	<i>Glycinde gurjanovae</i>	3	0.0063	3.8

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea

A5.17 **Table 7** lists out the five most abundant species at every sampling point in dry season. VHR-B1 was dominated by polychaetes *Minuspio cirrifera* (30%), *Tharyx* sp (13%) and amphipods (16%). VHR-B2 was dominated by amphipods (67%) and polychaete *Minuspio cirrifera* (19%). VHR-B4 was dominated by polychaetes *Minuspio cirrifera* (20%), *Sigambra hanaokai* (10%) and *Mediomastus* sp. (10%). There were only 5 species found at VHR-B5 while the polychaete *Sigambra hanaokai* (82%) was regarded as dominant species.

**Table 7 Five Most Abundant Species at Every Sampling Point at Mid Victoria Harbour in Dry Season**

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
VHR-B1	P	<i>Minuspio cirrifera</i>	970	0.121	30.4
	C	Amphipod spp.	523	0.1753	16.4
	P	<i>Tharyx</i> sp.	413	0.2733	13
	P	<i>Mediomastus</i> sp.	287	0.932	9
	P	<i>Eunice indica</i>	210	0.7757	6.6

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
VHR-B2	C	Amphipod spp.	730	0.446	67.2
	P	<i>Minuspio cirrifera</i>	203	0.0423	18.7
	P	<i>Sigambra hanaokai</i>	43	0.0483	4
	P	<i>Glycinde gurjanovae</i>	23	0.0783	2.1
	P	<i>Nectoneanthes alatopalpis</i>	13	0.173	1.2
VHR-B3	N.A.				
VHR-B4	P	<i>Minuspio cirrifera</i>	33	0.003	20
	P	<i>Sigambra hanaokai</i>	17	0.0063	10
	P	<i>Mediomastus sp.</i>	17	0.03	10
	P	<i>Glycinde gurjanovae</i>	13	0.0113	8
	P	<i>Nectoneanthes alatopalpis</i>	13	0.1203	8
VHR-B5	P	<i>Sigambra hanaokai</i>	73	0.076	81.5
	M	<i>Anodontia stearnsiana</i>	7	24.0117	7.4
	P	<i>Aglaophamus dibranchis</i>	3	0.0003	3.7
	P	<i>Mediomastus sp.</i>	3	0.0003	3.7
	P	<i>Ophiodromus obscura</i>	3	0.002	3.7

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca

A5.18 The complete list of collected specimens is provided in **Table 8 to Table 17**.

**Table 8 Benthic Communities at VHR-B1 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	13	0.00	1	0.00	7	0.00	21	0.00
2	P	<i>Amaeana</i> sp.	3	0.00	2	0.01			5	0.01
3	P	<i>Branchiomma cingulata</i>			1	0.01			1	0.01
4	P	<i>Cirriformia</i> sp.	34	0.04	23	0.01	39	0.06	96	0.12
5	P	<i>Dorvillea</i> sp. 1	5	0.00	4	0.00	9	0.00	18	0.01
6	P	<i>Ehlersleanira hwanghaiensis</i>			3	0.00			3	0.00
7	P	<i>Eulepethus hamifera</i>			1	0.01			1	0.01
8	P	<i>Eunice indica</i>	40	0.26	162	0.80	66	0.50	268	1.55
9	P	<i>Glycera alba</i>					7	0.00	7	0.00
10	P	<i>Glycera chirori</i>	5	0.09	13	0.16	14	0.27	32	0.52
11	P	<i>Glycinde gurjanovae</i>	14	0.00	3	0.00			17	0.01
12	P	<i>Harmothoe</i> sp. 1					1	0.00	1	0.00
13	P	<i>Linopherus paucibranchiata</i>	5	0.01	6	0.02	4	0.01	15	0.04
14	P	<i>Lumbrinereis</i> sp. 1	1	0.00	1	0.00			2	0.00
15	P	<i>Marphysa sanguinea</i>			1	0.14			1	0.14
16	P	<i>Mediomastus</i> sp.	11	0.00	19	0.01	19	0.01	49	0.03
17	P	<i>Naineris</i> sp.	1	0.00	4	0.01	5	0.00	10	0.02
18	P	<i>Nectoneanthes alatopalpis</i>	3	0.00	14	0.01	15	0.01	32	0.03
19	P	<i>Onuphis eremita</i>					1	0.01	1	0.01
20	P	<i>Ophiodromus angustifrons</i>	3	0.00			3	0.00	6	0.00
21	P	<i>Pectinaria conchilega</i>	2	0.00					2	0.00
22	P	<i>Pista</i> sp.					1	0.00	1	0.00
23	P	<i>Poecilochaetus hystricosus</i>					1	0.00	1	0.00
24	P	<i>Prionospio malmgreni</i>					1	0.00	1	0.00
25	P	<i>Pseudopolydora paucibranchiata</i>	2	0.00			1	0.00	3	0.00
26	P	<i>Rhynchospio</i> sp.					7	0.00	7	0.00
27	P	<i>Sigambra hanaokai</i>			1	0.00	1	0.00	2	0.00

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
28	P	<i>Tharyx sp.</i>	20	0.01			7	0.01	27	0.02
29	C	<i>Alpheus brevicristatus</i>					5	0.09	5	0.09
30	C	Amphipod spp.	6	0.00	2	0.00	32	0.03	40	0.04
31	Cn	<i>Anthopleura japonica</i>			1	0.04			1	0.04
32	M	<i>Anodonta steamsiana</i>			1	0.01			1	0.01
33	M	<i>Calyptrea morbida</i>	1	0.01	2	0.01	1	0.00	4	0.02
34	M	<i>Rhodopetala rosea</i>					3	0.13	3	0.13
35	M	<i>Ruditapes philipinarum</i>	20	20.33	34	65.57	23	31.23	77	117.13
36	M	<i>Theora lata</i>					1	0.01	1	0.01
37	N	Nemertean spp.	3	0.00			1	0.00	4	0.00
Total			192	20.772	299	66.8313	275	32.3969	766	120.00

Notes :

(1) P = Polychaeta, C = Crustacea, Cn = Cnidaria, M = Mollusca, N = Nemertea

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 9 Benthic Communities at VHR-B2 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>					1	0.00	1	0.00
2	P	<i>Aglaophamus sinensis</i>	1	0.03					1	0.03
3	P	<i>Capitella sp.</i>			2	0.00			2	0.00
4	P	<i>Ceratonereis sp. 1</i>			1	0.00			1	0.00
5	P	<i>Ehlersileanira hwanghaiensis</i>			2	0.00	1	0.00	3	0.00
6	P	<i>Glycera alba</i>	1	0.00					1	0.00
7	P	<i>Glycinde gurjanovae</i>			2	0.01	2	0.00	4	0.01
8	P	<i>Harmothoe asiatica</i>			1	0.01			1	0.01
9	P	<i>Linopherus paucibranchiata</i>					1	0.08	1	0.08



No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
10	P	<i>Mediomastus</i> sp.					1	0.01	1	0.01
11	P	<i>Naineris</i> sp.			2	0.17	3	0.25	5	0.42
12	P	<i>Nectoneanthes alatopalpis</i>	2	0.00			1	0.00	3	0.00
13	P	<i>Ophelina acuminata</i>	1	0.11					1	0.11
14	P	<i>Pectinaria conchilega</i>					3	0.02	3	0.02
15	P	<i>Poecilochaetus hystricosus</i>	1	0.01					1	0.01
16	P	<i>Prionospio malmgreni</i>			1	0.00			1	0.00
17	P	<i>Pseudopolydora paucibranchiata</i>			2	0.00	4	0.01	6	0.01
18	P	<i>Sigambra hanaokai</i>	2	0.00	2	0.00			4	0.00
19	P	<i>Tharyx</i> sp.	2	0.01					2	0.01
20	C	<i>Alpheus</i> sp. 1	1	0.01	1	0.01			2	0.02
21	C	Amphipod spp.	3	0.00	5	0.01			8	0.01
22	C	<i>Atypopenaeus</i> sp. 1					2	0.02	2	0.02
23	C	Isopod spp.			1	0.00			1	0.00
24	C	<i>Processa japonica</i>	2	0.02					2	0.02
25	Eh	<i>Thalassema sabinum</i>	1	1.02	3	0.48			4	1.50
26	F	<i>Odontamblyopus rubicundus</i>	1	0.34					1	0.34
27	M	<i>Anodontia steamsiana</i>	1	0.04			5	1.66	6	1.70
28	M	<i>Ruditapes philipinarum</i>	5	0.22					5	0.22
29	M	<i>Solen dunkerianus</i>	1	0.15					1	0.15
30	M	<i>Theora lata</i>	2	0.02	2	0.04	2	0.00	6	0.07
31	N	Nemertean spp.	1	0.00	1	0.00			2	0.00
Total			28	1.9897	28	0.7506	26	2.0406	82	4.78

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea, Eh = Echiura, F = Fish

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specis with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 10 Benthic Communities at VHR-B3 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Capitella</i> sp.	4	0.00	8	0.00	4	0.00	16	0.01
Total			4	0.0011	8	0.0025	4	0.0015	16	0.0051

Notes:

(1) P = Polychaeta

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 11 Benthic Communities at VHR-B4 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Cirriformia</i> sp.					1	0.00	1	0.00
2	P	<i>Eunice indica</i>					2	0.01	2	0.01
3	P	<i>Glycinde gurjanovae</i>					1	0.00	1	0.00
4	P	<i>Lumbrinereis shiinoi</i>					2	0.00	2	0.00
5	P	<i>Mediomastus</i> sp.					2	0.00	2	0.00
6	P	<i>Pseudopolydora paucibranchiata</i>	1	0.00	1	0.00			2	0.00
7	P	<i>Sigambra hanaokai</i>	2	0.00			4	0.00	6	0.01
8	P	<i>Tharyx</i> sp.	1	0.00			6	0.01	7	0.01
9	M	<i>Theora lata</i>					3	0.07	3	0.07
10	N	Nemertean spp.					3	0.02	3	0.02
Total			4	0.0048	1	0.0013	24	0.1274	29	0.1335

Notes :

(1) P = Polychaeta, M = Mollusca, N = Nemertea

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 12 Benthic Communities at VHR-B5 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Bhawania brevis</i>	1	0.00					1	0.00
2	P	<i>Glycinde gurjanovae</i>			1	0.00			1	0.00
3	P	<i>Linopherus paucibranchiata</i>	1	0.12					1	0.12
4	P	<i>Mediomastus sp.</i>	1	0.00					1	0.00
5	P	<i>Nectoneanthes alatopalpis</i>	1	0.01	2	0.02	4	0.02	7	0.04
6	P	<i>Otopsis sp.</i>	2	0.00					2	0.00
7	P	<i>Sigambra hanaokai</i>	4	0.00			6	0.01	10	0.01
8	C	<i>Amphipod spp.</i>	1	0.00					1	0.00
9	C	<i>Typhlocarcinus villosus</i>					1	0.40	1	0.40
10	M	<i>Anodontia steamsiana</i>			1	3.63			1	3.63
Total			11	0.1276	4	3.6512	11	0.4259	26	4.20

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 13 Benthic Communities at VHR-B1 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>					3	0.01	3	0.01
2	P	<i>Aglaophamus sinensis</i>	2	0.01	2	0.00			4	0.01
3	P	<i>Cirriformia sp.</i>	9	0.01	24	0.01	22	0.02	55	0.04
4	P	<i>Eunice indica</i>	4	0.01	42	0.13	17	0.09	63	0.23
5	P	<i>Glycera alba</i>	2	0.01					2	0.01
6	P	<i>Glycera chirori</i>			4	0.10	4	0.09	8	0.18
7	P	<i>Glycinde gurjanovae</i>	5	0.01	11	0.02	12	0.05	28	0.08
8	P	<i>Hydroides elegans</i>			1	0.00	1	0.00	2	0.00

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
9	P	<i>Loimia bandera</i>	2	0.54					2	0.54
10	P	<i>Mediomastus</i> sp.	17	0.11	49	0.09	20	0.08	86	0.28
11	P	<i>Minuspio cirrifera</i>	50	0.00	137	0.02	104	0.02	291	0.04
12	P	<i>Naineris</i> sp.			2	0.00	1	0.00	3	0.00
13	P	<i>Nectoneanthes alatopalpis</i>	3	0.01	8	0.02	5	0.06	16	0.09
14	P	<i>Onuphis eremita</i>					5	0.03	5	0.03
15	P	<i>Ophelina acuminata</i>					2	0.02	2	0.02
16	P	<i>Ophiodromus obscura</i>	3	0.00	14	0.00	1	0.00	18	0.00
17	P	<i>Paralacydonia paradox</i>			1	0.00			1	0.00
18	P	<i>Paraprionospio pinnata</i>					1	0.00	1	0.00
19	P	<i>Phyllodoce</i> sp. 1			2	0.00			2	0.00
20	P	<i>Pista</i> sp.					1	0.00	1	0.00
21	P	<i>Poecilochaetus hystricosus</i>	1	0.00			3	0.01	4	0.01
22	P	<i>Prionospio malmgreni</i>	1	0.00			1	0.00	2	0.00
23	P	<i>Scalibregma inflatum</i>	1	0.00					1	0.00
24	P	<i>Schistocomus</i> sp.	1	0.00	1	0.00	2	0.00	4	0.00
25	P	<i>Schistomeringos rudolphi</i>			3	0.00	2	0.00	5	0.00
26	P	<i>Scoelelepis squamata</i>					1	0.00	1	0.00
27	P	<i>Sigambra hanaokai</i>	10	0.01	12	0.01	24	0.04	46	0.05
28	P	Syllidae spp.	3	0.00	1	0.00	2	0.00	6	0.00
29	P	<i>Tharyx</i> sp.	20	0.01	77	0.05	27	0.03	124	0.08
30	N	Nemertean spp.			1	0.01			1	0.01
31	C	Amphipod spp.	25	0.01	69	0.02	63	0.02	157	0.05
32	C	<i>Charybdis variegata</i>			1	0.06	1	0.02	2	0.08
33	M	<i>Angulus emarginatus</i>					1	0.42	1	0.42
34	M	<i>Anodontia steamsiana</i>			1	0.00			1	0.00
35	M	<i>Calyptrea morbida</i>	1	0.01					1	0.01
36	M	<i>Ruditapes philipinarum</i>	1	2.66	4	27.28	2	2.15	7	32.09
Total			161	3.4049	467	27.8248	328	3.1534	956	34.38

Notes :

- (1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea  
 (2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 14 Benthic Communities at VHR-B2 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	2	0.00					2	0.00
2	P	<i>Aglaophamus sinensis</i>	1	0.01					1	0.01
3	P	<i>Glycinde gurjanovae</i>	7	0.02					7	0.02
4	P	<i>Linopherus paucibranchiata</i>	1	0.00					1	0.00
5	P	<i>Loimia bandera</i>	1	0.32					1	0.32
6	P	<i>Mediomastus</i> sp.			1	0.00			1	0.00
7	P	<i>Minuspio cirrifera</i>	49	0.01	3	0.00	9	0.00	61	0.01
8	P	<i>Naineris</i> sp.	2	0.09					2	0.09
9	P	<i>Nectoneanthes alatopalpis</i>	4	0.05					4	0.05
10	P	<i>Ophiodromus angustifrons</i>	2	0.00					2	0.00
11	P	<i>Sigambra hanaokai</i>	9	0.01	4	0.00			13	0.01
12	P	<i>Tharyx</i> sp.	4	0.02					4	0.02
13	C	<i>Alpheus distinguendus</i>	1	0.86					1	0.86
14	C	<i>Alpheus japonicus</i>	3	0.37					3	0.37
15	C	Amphipod spp.	214	0.13	2	0.00	3	0.00	219	0.13
16	C	<i>Charybdis variegata</i>	1	3.76					1	3.76
17	C	<i>Eucrate costata</i>					1	0.18	1	0.18
18	C	Isopod spp.	1	0.00					1	0.00
19	F	<i>Taenioides anquillaris</i>	1	0.22					1	0.22
Total			303	5.88	10	0.0083	13	0.18	326	6.07

Notes :

- (1) P = Polychaeta, C = Crustacea, F = Fish  
 (2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 15 Benthic Communities at VHR-B3 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1		\							0	0.00
Total			0	0	0	0	0	0	0	0

Notes:

No fauna was found at this sampling point

**Table 16 Benthic Communities at VHR-B4 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>			1	0.00	2	0.00	3	0.00
2	P	<i>Aglaophamus sinensis</i>					1	0.03	1	0.03
3	P	<i>Ehlersileanira hwanghaiensis</i>			1	0.00			1	0.00
4	P	<i>Glycinde gurjanovae</i>	4	0.00					4	0.00
5	P	<i>Lumbrinereis nagae</i>			1	0.00			1	0.00
6	P	<i>Lysidice ninetta</i>			1	0.00			1	0.00
7	P	<i>Mediomastus sp.</i>			5	0.01			5	0.01
8	P	<i>Minuspio cirrifera</i>	6	0.00	4	0.00			10	0.00
9	P	<i>Nectoneanthes alatopalpis</i>			4	0.04			4	0.04
10	P	<i>Ophiodromus obscura</i>			1	0.00			1	0.00
11	P	<i>Pectinaria conchilega</i>	1	0.00					1	0.00
12	P	<i>Phylo ornatus</i>			1	0.01			1	0.01
13	P	<i>Prionospio ehlersi</i>	1	0.00	1	0.00			2	0.01
14	P	<i>Sigambra hanaokai</i>	2	0.00	2	0.00	1	0.00	5	0.00
15	P	<i>Tharyx sp.</i>			3	0.00			3	0.00
16	C	<i>Alpheus brevicristatus</i>			1	0.06			1	0.06

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
17	C	<i>Alpheus distinguendus</i>			1	0.42			1	0.42
18	C	<i>Alpheus</i> sp. 1			1	0.07			1	0.07
19	C	<i>Atyopenaeus</i> sp. 1			1	0.02			1	0.02
20	C	<i>Typhlocarcinus nudus</i>					1	1.12	1	1.12
21	C	<i>Typhlocarcinus villosus</i>			1	5.31			1	5.31
22	F	<i>Cryptocentrus filifer</i>	1	0.20					1	0.20
Total			15	0.2057	30	5.94	5	1.15	50	7.30

Notes :

(1) P = Polychaeta, C = Crustacea, F = Fish

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>**Table 17 Benthic Communities at VHR-B5 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>					1	0.00	1	0.00
2	P	<i>Mediomastus</i> sp.					1	0.00	1	0.00
3	P	<i>Ophiodromus obscura</i>			1	0.00			1	0.00
4	P	<i>Sigambra hanaokai</i>	7	0.01	6	0.00	9	0.01	22	0.02
5	M	<i>Anodontia steamsiana</i>	1	4.56			1	2.64	2	7.20
Total			8	4.5658	7	0.0055	12	2.6558	27	7.23

Notes :

(1) P = Polychaeta, M = Mollusca

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

Causeway Bay Typhoon Shelter, southeast corner

A5.19 After sediment sorting and re-check, no fauna was collected at both sampling sites in wet and dry seasons.

Shek O

A5.20 **Table 18** lists the total abundance and total biomass of every faunal group in wet and dry seasons. A total of 590 and 251 specimens were collected in wet and dry seasons respectively. Eighty one of 85 taxa were identified to genus or species levels. The most diverse faunal group was Polychaeta (46 species) followed by 16 species of Crustacea, 8 species of Mollusca, 7 species of Echinodermata (5 species + sea urchin 1 + sea cucumber 1), 2 species of Chordata (bony fish), 2 species of Sipuncula, 1 species of Echiura and 1 species of Cephalochordata (amphioxus). Amphipoda and Nemertea were classified into two general taxa due to limited taxonomic references. In wet season of samplings, 50%, 26%, 11%, 7% and 6% of total abundance were polychaetes, crustaceans, amphioxus, sipunculans and other faunal groups respectively. The total biomass was 6.7538g, in which 71%, 8%, 8%, 7% and 6% of total biomass were accounted by crustaceans, echiurans, fishes, polychaetes and other faunal groups respectively. In dry season of samplings, 52%, 22%, 14% and 12% of total abundance were polychaetes, crustaceans, sipunculans and other faunal groups respectively. The total biomass was 9.4259g, in which 72%, 12%, 7% and 9% of total biomass were accounted by crustaceans, mollusks, polychaetes and other faunal groups respectively.

**Table 18 Total Abundance and Biomass of Faunal Group Sampled at Shek O in Wet and Dry Seasons**

Faunal group	Total individual	% <sup>(1)</sup>	Total biomass (g)	% <sup>(1)</sup>
<b>Wet season</b>				
Polychaeta	296	50	0.4946	7
Crustacea	153	26	4.8236	71
Amphioxus	64	11	0.0195	0
Sipuncula	43	7	0.044	1
Echiura	22	4	0.5689	8
Mollusca	7	1	0.2615	4
Nemertea	4	1	0.0327	0
Fish	1	0	0.509	8
<b>Total</b>	<b>590</b>		<b>6.7538</b>	
<b>Dry season</b>				
Polychaeta	130	52	0.6172	7
Crustacea	56	22	6.8322	72
Sipuncula	35	14	0.0509	1
Echinodermata	11	4	0.4221	4
Mollusca	7	3	1.1403	12
Echiura	6	2	0.3023	3
Nemertea	2	1	0.0341	0
Fish	2	1	0.0263	0
Amphioxus	2	1	0.0005	0
<b>Total</b>	<b>251</b>		<b>9.4259</b>	

Notes :

(1) 0 %: Total individual / biomass of the faunal group is less than 1% of that of all specimens.

A5.21 **Table 19** shows the percent proportion of each faunal group (in total abundance) at every sampling site in wet and dry seasons. In wet season, polychaetes were the most abundant group and accounted for 35-74% of total abundance among all sampling sites. Crustaceans were another abundant group at all sampling sites (11-31%). Sipunculans were less abundant that accounted for 14-15% of total abundance at SKO-B1, SKO-B4 and 3-5% at SKO-B2 and SKO-B3. Amphioxus was found at SKO-B2, SKO-B3 and SKO-B4 that accounted for 3-12% of total abundance. Other faunal groups accounted for 5-8% of total abundance at all sampling sites. In dry season, polychaetes were also the most abundant group and accounted for 48-83% of total abundance among all sampling



sites. Crustaceans were abundant at SKO-B2, SKO-B3, SKO-B4 (18-31%) but much less abundant at SKO-B1 (4%). Sipunculans were second abundant at SKO-B4 (23%) but less abundant at other sampling sites (< 10%). Other faunal groups accounted for 4-19% of total abundance at all sampling sites.

**Table 19 The Percent Proportion of Faunal Groups (in total abundance) at Every Sampling Point at Shek O in Wet and Dry Seasons**

% Proportion of faunal group <sup>(1)</sup>	SKO-B1	SKO-B2	SKO-B3	SKO-B4
<b>Wet season</b>				
Polychaeta	74	62	55	35
Crustacea	11	29	24	31
Sipuncula	15	5	3	14
Amphioxus		5	12	12
Nemertea			1	1
Mollusca			0	3
Fish			0	
Echiura			4	4
<b>Dry season</b>				
Polychaeta	83	52	49	48
Sipuncula	9	10	1	23
Crustacea	4	31	31	18
Echiura	4			4
Mollusca		3	3	3
Echinodermata			12	2
Amphioxus				2
Fish			3	
Nemertea		3	1	

Notes :

(1) 0 %: Percentage proportion of the faunal group is less than 1% of that of all specimens.

A5.22 **Table 20** shows the total number of species, total abundance, total biomass,  $H'$ ,  $J$  at every sampling site in wet and dry seasons. The biological parameters were generally different between inner sampling sites (SKO 1, SKO 2) and outer sampling sites (SKO 3, SKO 4). In wet season of samplings, the total number of species (11-16 spp.  $0.3m^{-2}$ ), total abundance (70-90 ind.  $m^{-2}$ ) and total biomass (0.34-0.78 g  $m^{-2}$ ) at inner sampling sites were lower than that at outer sampling sites (total number of species: 37-49 spp.  $0.3m^{-2}$ ; total abundance: 603-1203 ind.  $m^{-2}$ , total biomass: 7.61-13.78 g  $m^{-2}$ ). Similarly, the total number of species (15-17 spp.  $0.3m^{-2}$ ), total abundance (77-97 ind.  $m^{-2}$ ) and total biomass (0.53-2.22 g  $m^{-2}$ ) at inner sampling sites were lower than that at outer sampling sites (total number of species: 31-40 spp.  $0.3m^{-2}$ ; total abundance: 247-417 ind.  $m^{-2}$ , total biomass: 12.32-16.36 g  $m^{-2}$ ) in dry season of samplings. There was no obvious seasonal change except the decline of total abundance at outer sampling sites (SKO 3, SKO 4).

A5.23 Relatively the  $H'$  and  $J$  were similar among all sampling sites and across seasons. The  $H'$  ranged 2.13-2.96 and 2.57-3.11 in wet and dry seasons respectively. The  $J$  ranged 0.76-0.94 and 0.84-0.95 in wet and dry seasons respectively.

**Table 20 Number of Species, Total Abundance, Total Biomass, Shannon-Weaver Diversity Index ( $H'$ ) and Pielou's Species Evenness ( $J$ ) at Every Sampling Point at Shek O in Wet and Dry Seasons**

	Season	SKO-B1	SKO-B2	SKO-B3	SKO-B4
Total number of species (spp. $0.3 m^{-2}$ )	Wet	16	11	49	37
	Dry	15	17	31	40
Total abundance (ind. $m^{-2}$ )	Wet	90	70	1203	603
	Dry	77	97	247	417
Total biomass (g $m^{-2}$ )	Wet	0.7843	0.3357	7.6100	13.7827
	Dry	0.5250	2.2197	12.3190	16.3560

<b>Shannon-Weaver Diversity Index <math>H'</math></b>	Wet	2.61	2.13	2.96	2.92
	Dry	2.57	2.69	3.11	3.08
<b>Pielou's Species Evenness <math>J</math></b>	Wet	0.94	0.89	0.76	0.81
	Dry	0.95	0.95	0.9	0.84

A5.24 **Table 21** lists out the five most abundant species at every sampling site in wet season of samplings. The five most abundant species at SKO-B1 were generally low and even in abundance (7-13 ind. m<sup>-2</sup>). No dominant species could be determined. Similarly, the benthic community at SKO-B2 was low in abundance. Although the relative abundance of polychaete *Aglaophamus dibranchis* was highest (33%), the actual density was low (23 ind. m<sup>-2</sup>) that was hardly regarded as dominant species. The benthic communities at SKO-B3 and SKO-B4 were dominated by polychaete *Cirriformia* sp. (mean 134 ind. m<sup>-2</sup>), amphipods (165 ind. m<sup>-2</sup>) and amphioxus *Branchiostoma belcheri* (105 ind. m<sup>-2</sup>). Sipunculan *Apionsoma trichocephalus* was dominant (87 ind. m<sup>-2</sup>) at SKO-B4.

**Table 21 Five Most Abundant Species at Every Sampling Point at Shek O in Wet Season**

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
SKO-B1	Sp	<i>Apionsoma trichocephalus</i>	13	0.0123	15
	P	<i>Poecilochaetus</i> sp. 1	13	0.0127	15
	P	<i>Cirriformia</i> sp.	10	0.0047	11
	P	<i>Notomastus</i> sp.	7	0.0117	7
	P	<i>Ophiodromus angutifrons</i>	7	0.0013	7
SKO-B2	P	<i>Aglaophamus dibranchis</i>	23	0.0793	33
	P	<i>Lumbrineris shiinoi</i>	7	0.0087	10
	C	Amphipod spp.	7	0.0010	10
	P	<i>Leocrates</i> sp.	7	0.0650	10
	C	<i>Apseudes</i> sp.	7	0.0020	10
SKO-B3	P	<i>Cirriformia</i> sp.	230	0.1507	19
	C	Amphipod spp.	210	0.0583	17
	Am	<i>Branchiostoma belcheri</i>	140	0.0473	12
	P	<i>Prionospio malmgreni</i>	67	0.0120	6
	P	<i>Lumbrineris</i> sp. 1	47	0.0373	4
SKO-B4	C	Amphipod spp.	120	0.0437	20
	Sp	<i>Apionsoma trichocephalus</i>	87	0.0730	14
	Am	<i>Branchiostoma belcheri</i>	70	0.0160	12
	P	<i>Cirriformia</i> sp.	37	0.0130	6
	P	<i>Prionospio malmgreni</i>	37	0.0160	6

Notes :

(1) P = Polychaeta, C = Crustacea, Am = Amphioxus, Sp = Sipuncula

A5.25 **Table 22** lists out the five most abundant species at every sampling site in dry season of samplings. The five most abundant species at inner sampling sites (SKO-B1, SKO-B2) were generally low and even in abundance (7-13 ind. m<sup>-2</sup>). No dominant species could be determined. The benthic communities at outer sampling sites (SKO-B3, SKO-B4) were dominated by polychaete *Magelona* sp. (mean 37 ind. m<sup>-2</sup>), crustacean *Xenophthalmus pinnotheroides* (mean 32 ind. m<sup>-2</sup>). Polychaete *Marphysa stragulum* was dominant at SKO-B3 (27 ind. m<sup>-2</sup>). Similar to wet season of samplings, sipunculan *Apionsoma trichocephalus* was dominant at SKO-B4 (93 ind. m<sup>-2</sup>).

**Table 22 Five Most Abundant Species at Every Sampling Point at Shek O in Dry Season**

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
SKO-B1	P	<i>Sigambra hanaokai</i>	13	0.0057	17
	P	<i>Glycinde gurjanovae</i>	10	0.0043	13
	Sp	<i>Apionsoma trichocephalus</i>	7	0.0007	9
	P	<i>Aglaophamus sinensis</i>	7	0.0517	9
	P	<i>Ophelina acuminata</i>	7	0.0643	9

Sampling point	Group <sup>(1)</sup>	Species	Mean density (ind. m <sup>-2</sup> )	Mean biomass (g m <sup>-2</sup> )	Relative abundance (%)
SKO-B2	C	<i>Neoxenopthalmus obscurus</i>	13	1.1597	14
	Sp	<i>Apionsoma trichocephalus</i>	10	0.0113	10
	P	<i>Aglaophamus dibranchis</i>	10	0.0273	10
	P	<i>Otopsis</i> sp.	10	0.0023	10
	C	<i>Typhlocarcinus villosus</i>	7	0.2827	7
SKO-B3	P	<i>Magelona</i> sp.	27	0.0237	11
	P	<i>Marphysa stragulum</i>	27	0.3053	11
	C	<i>Xenopthalmus pinnotheroides</i>	27	6.1823	11
	C	<i>Typhlocarcinus villosus</i>	20	2.5920	8
	P	<i>Eunice indica</i>	17	0.1377	7
SKO-B4	Sp	<i>Apionsoma trichocephalus</i>	93	0.0500	22
	P	<i>Magelona</i> sp.	47	0.0173	11
	C	<i>Xenopthalmus pinnotheroides</i>	37	8.7930	9
	P	<i>Cirriformia</i> sp.	20	0.0173	5
	P	<i>Eunice indica</i>	17	0.3747	4

Notes :

(1) P = Polychaeta, C = Crustacea, Sp = Sipuncula

A5.26 **Table 23** shows the complete list of collected amphioxus *Branchiostoma belcheri* in present study. In wet season of samplings, 1, 42 and 21 individuals were collected at SKO-B2, SKO-B3 and SKO-B4 respectively. The average body length and wet weight were 8.47 mm and 0.0003 g respectively. In dry season of samplings, 2 individuals were collected at SKO-B4 only. The average body length and wet weight were 8.50 mm and 0.0003 g respectively. No developing gonad was observed in all individuals.

**Table 23 List of Collected Amphioxus (*Branchiostoma belcheri*) in present study**

Season	Wet							Dry	
	SKO-B2	SKO-B3			SKO-B4			SKO-B4	
Grab replicate	3	1	2	3	1	2	3	2	3
Body length (mm)	10	15	11	11	9	14	14	8	9
		13	11	7	9	9	11		
		12	10	7	9	7	11		
		12	10	6	8		10		
		11	10	5	8		7		
		10	9		8		6		
		10	9		7		6		
		10	8		7		5		
		9	8		7				
		9	8		6				
		9	7						
		8	7						
		8	7						
		8	7						
		8	6						
		7	6						
	6	5							
	5	5							
	4								
Total number of individuals	1	19	18	5	10	3	8	1	1
Average body length (mm)	10	9.16	8	7.2	7.8	10	8.75	8	9
Total wet weight (g)	0.0005	0.0103	0.0031	0.0008	0.001	0.0017	0.0021	0.0001	0.0004

A5.27 The complete list of collected specimens is provided in **Table 24 to Table 31**.

**Table 24 Benthic Communities at SKO-B1 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus sinensis</i>	1	0.01					1	0.01
2	P	<i>Amaeana</i> sp.					1	0	1	0
3	P	<i>Barantolla</i> sp.			1	0			1	0
4	P	<i>Ceratonereis marmorata</i>					1	0	1	0
5	P	<i>Cirriformia</i> sp.					3	0	3	0
6	P	<i>Euclymene oerstedii</i>					1	0	1	0
7	P	<i>Glycinde gurjanovae</i>					1	0	1	0
8	P	<i>Lumbrineris shiinoi</i>			1	0			1	0
9	P	<i>Notomastus</i> sp.					2	0	2	0
10	P	<i>Ophiodromus angustifrons</i>					2	0	2	0
11	P	<i>Poecilochaetus</i> sp. 1					4	0	4	0
12	P	<i>Prionospio malmgreni</i>					2	0	2	0
13	C	Amphipod spp.					1	0	1	0
14	C	<i>Typhlocarcinops denticarpus</i>			1	0.04			1	0.04
15	C	<i>Xenophthalmus pinnotheroides</i>					1	0.16	1	0.16
16	Sp	<i>Apionsoma trichocephalus</i>			1	0	3	0	4	0
Total			1	0.0138	4	0.0463	22	0.1752	27	0.24

Notes :

(1) P = Polychaeta, C = Crustacea, Sp = Sipuncula

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 25 Benthic Communities at SKO-B2 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	2	0.01	3	0.01	2	0.01	7	0.02
2	P	<i>Glycera alba</i>	1	0					1	0

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
3	P	<i>Leocrates</i> sp.	2	0.02					2	0.02
4	P	<i>Lumbrineris shiinoi</i>					2	0	2	0
5	P	<i>Poecilochaetus</i> sp. 1			1	0			1	0
6	C	Amphipod spp.	2	0					2	0
7	C	<i>Apseudes</i> sp.	2	0					2	0
8	C	<i>Lucifer</i> sp.	1	0					1	0
9	C	<i>Typhlocarcinops denticarpus</i>	1	0.05					1	0.05
10	Am	<i>Branchiostoma belcheri</i>					1	0	1	0
11	Sp	<i>Apionsoma trichocephalus</i>	1	0					1	0
Total			12	0.0796	4	0.0095	5	0.0116	21	0.1

Notes :

(1) P = Polychaeta, C = Crustacea, Sp = Sipuncula, Am = Amphioxus

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 26 Benthic Communities at SKO-B3 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	6	0	2	0			8	0
2	P	<i>Amaeana</i> sp.	3	0	4	0	6	0.03	13	0.03
3	P	<i>Ceratonereis marmorata</i>			2	0	3	0.01	5	0.01
4	P	<i>Cirriformia</i> sp.	49	0.02	14	0	6	0.03	69	0.05
5	P	<i>Euclymene oerstedii</i>	1	0.01					1	0.01
6	P	<i>Eunice indica</i>			3	0.01	1	0	4	0.01
7	P	<i>Glycera alba</i>			1	0			1	0
8	P	<i>Glycinde gurjanovae</i>	2	0					2	0
9	P	<i>Laonome indica</i>	2	0					2	0
10	P	<i>Linopherus paucibranchiata</i>					1	0	1	0

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
11	P	<i>Loimia ingens</i>	1	0	1	0.01	1	0.01	3	0.02
12	P	<i>Lumbrineris</i> sp. 1			5	0	9	0.01	14	0.01
13	P	<i>Magelona</i> sp.	4	0					4	0
14	P	<i>Marphysa sanguinea</i>					1	0.04	1	0.04
15	P	<i>Marphysa stragulum</i>			7	0	6	0.02	13	0.03
16	P	<i>Naineris</i> sp.			1	0			1	0
17	P	<i>Notomastus</i> sp.	1	0	1	0.01			2	0.01
18	P	<i>Onuphis eremita</i>					1	0.02	1	0.02
19	P	<i>Paralacydonia paradox</i>					2	0	2	0
20	P	<i>Paraprionospio pinnata</i>	2	0					2	0
21	P	<i>Phyllodoce</i> sp. 1	4	0	2	0	2	0	8	0.01
22	P	<i>Phylo ornatus</i>	6	0	1	0			7	0
23	P	<i>Pista</i> sp.			1	0			1	0
24	P	<i>Poecilochaetus</i> sp. 1	4	0	1	0	3	0.01	8	0.01
25	P	<i>Prionospio malmgreni</i>	16	0	2	0	2	0	20	0
26	P	<i>Rhynchospio</i> sp.			1	0			1	0
27	P	<i>Syllis</i> sp.					2	0	2	0
28	P	<i>Terebellides stroemii</i>	2	0			1	0	3	0
29	C	<i>Alpheus brevicristatus</i>					1	0	1	0
30	C	Amphipod spp.	31	0.01	21	0	11	0	63	0.02
31	C	<i>Apseudes</i> sp.	4	0	3	0	1	0	8	0
32	C	<i>Diastylis</i> sp.			1	0			1	0
33	C	<i>Nebalia</i> sp.	3	0					3	0
34	C	<i>Neoxenophthalmus obscurus</i>			1	0.09	1	0.15	2	0.23
35	C	<i>Pinnixa penultipedalis</i>	1	0	1	0.01			2	0.01
36	C	<i>Portunus tweediei</i>	1	0.02					1	0.02
37	C	<i>Typhlocarcinops denticarpus</i>			2	0.08			2	0.08
38	C	<i>Typhlocarcinus villosus</i>			1	0.12	4	0.45	5	0.56
39	Ec	<i>Amphioplus lucidus</i>			3	0.01	1	0.11	4	0.12

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
40	Ec	<i>Amphiura hexactis</i>					1	0.01	1	0.01
41	Ec	<i>Dipsacaster pretiosus</i>			1	0.03			1	0.03
42	Ec	<i>Ophiocnemis marmorata</i>			2	0.04	5	0.11	7	0.15
43	Ec	Sea Urchin 1					1	0.2	1	0.2
44	Ec	Sea cucumber 1					1	0.01	1	0.01
45	Am	<i>Branchiostoma belcheri</i>	19	0.01	18	0	5	0	42	0.01
46	Sp	<i>Apionsoma trichocephalus</i>	2	0	3	0	7	0.01	12	0.02
47	N	Nemertean spp.	2	0.01	1	0.01			3	0.02
48	M	<i>Psammobia radiata</i>			1	0.01			1	0.01
49	F	<i>Muraenihthys</i> sp.					1	0.51	1	0.51
Total			166	0.1043	108	0.4524	87	1.73	361	2.28

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea, Sp = Sipuncula, Ec = Echinodermata, Am = Amphioxus, F= Fish

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 27 Benthic Communities at SKO-B4 in Wet Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Amaeana</i> sp.	2	0.01					2	0.01
2	P	<i>Ceratonereis marmorata</i>	1	0					1	0
3	P	<i>Chloeia parva</i>	4	0					4	0
4	P	<i>Cirriiformia</i> sp.	4	0	4	0	3	0	11	0
5	P	<i>Eunice indica</i>	1	0					1	0
6	P	<i>Glycinde gurjanovae</i>	1	0			1	0	2	0
7	P	<i>Linopherus paucibranchiata</i>	2	0	5	0.01	2	0	9	0.01
8	P	<i>Magelona</i> sp.			1	0	1	0	2	0
9	P	<i>Marphysa sanguinea</i>	2	0.02	2	0.04			4	0.06
10	P	<i>Marphysa stragulum</i>					2	0	2	0



No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
11	P	<i>Notomastus</i> sp.			1	0	1	0.02	2	0.03
12	P	<i>Ophelina acuminata</i>					1	0.01	1	0.01
13	P	<i>Ophiodromus angustifrons</i>	1	0	2	0			3	0
14	P	<i>Paraprionospio pinnata</i>			1	0			1	0
15	P	<i>Phyllodoce</i> sp. 1	1	0	1	0	2	0	4	0
16	P	<i>Phylo ornatus</i>	1	0	1	0			2	0
17	P	<i>Prionospio malmgreni</i>	5	0	4	0	2	0	11	0
18	P	<i>Rhynchospio</i> sp.			1	0			1	0
19	P	<i>Terebellides stroemii</i>			1	0			1	0
20	C	<i>Alpheus brevicristatus</i>			1	0.01			1	0.01
21	C	Amphipod spp.	11	0	16	0.01	9	0	36	0.01
22	C	<i>Apeudes</i> sp.	2	0	2	0	1	0	5	0
23	C	<i>Clorida latreillei</i>					1	0	1	0
24	C	<i>Eucrate crenata</i>			1	0.2			1	0.2
25	C	<i>Neoxenophthalmus obscurus</i>			2	0.04	2	0.32	4	0.36
26	C	<i>Pinnixa penultipedalis</i>	1	0.01					1	0.01
27	C	<i>Raphidopus ciliatus</i>	1	0.05			2	0.36	3	0.41
28	C	<i>Xenophthalmus pinnotheroides</i>	1	1.12	3	1.52			4	2.63
29	M	<i>Clausinella calophylla</i>					1	0.05	1	0.05
30	M	<i>Fulvia hungerfordi</i>	1	0.02	2	0.1			3	0.12
31	M	<i>Gari truncata</i>	1	0.08	1	0.01			2	0.08
32	Ec	<i>Amphioplus laevis</i>	1	0			1	0	2	0.01
33	Ec	<i>Amphioplus lucidus</i>	1	0.01			2	0.03	3	0.03
34	Ec	<i>Ophiocnemis marmorata</i>	1	0.01			1	0.02	2	0.02
35	Am	<i>Branchiostoma belcheri</i>	10	0	3	0	8	0	21	0
36	Sp	<i>Apionsoma trichocephalus</i>	11	0.01	8	0.01	7	0.01	26	0.02
37	N	Nemertean spp.			1	0.02			1	0.02
Total			67	1.3458	64	1.9649	50	0.82	181	4.13

Notes :

- (1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea, Sp = Sipuncula, Ec = Echinodermata, Am = Amphioxus  
(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 28 Benthic Communities at SKO-B1 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>					1	0.01	1	0.01
2	P	<i>Aglaophamus sinensis</i>			1	0.01	1	0.01	2	0.02
3	P	<i>Barantolla</i> sp.			1	0			1	0
4	P	<i>Eunice indica</i>					1	0	1	0
5	P	<i>Glycinde gurjanovae</i>	1	0	2	0			3	0
6	P	<i>Linopherus paucibranchiata</i>	1	0					1	0
7	P	<i>Magelona</i> sp.	1	0					1	0
8	P	<i>Mediomastus</i> sp.					1	0	1	0
9	P	<i>Ophelina acuminata</i>					2	0.02	2	0.02
10	P	<i>Paraprionospio pinnata</i>			1	0			1	0
11	P	<i>Prionospio malmgreni</i>			1	0			1	0
12	P	<i>Sigambra hanaokai</i>	1	0			3	0	4	0
13	Sp	<i>Apionsoma trichocephalus</i>	1	0	1	0			2	0
14	Eh	<i>Thalassema sabinum</i>			1	0.08			1	0.08
15	C	<i>Typhlocarcinus villosus</i>			1	0.02			1	0.02
Total			5	0.0045	9	0.1162	9	0.0368	23	0.16

Notes :

- (1) P = Polychaeta, C = Crustacea, Sp = Sipuncula, Eh = Echiura  
(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 29 Benthic Communities at SKO-B2 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	1	0			2	0	3	0.01
2	P	<i>Barantolla</i> sp.			1	0			1	0
3	P	<i>Cossurella dimorpha</i>					1	0	1	0
4	P	<i>Linopherus paucibranchiata</i>					1	0	1	0
5	P	<i>Lumbrineris</i> sp. 1	1	0					1	0
6	P	<i>Mediomastus</i> sp.					1	0	1	0
7	P	<i>Notomastus</i> sp.	2	0					2	0
8	P	<i>Otopsis</i> sp.	3	0					3	0
9	P	<i>Prionospio ehlersi</i>					1	0	1	0
10	P	<i>Sternaspis sculata</i>					1	0	1	0
11	N	Nemertean spp.			1	0.01			1	0.01
12	Sp	<i>Apionsoma trichocephalus</i>					3	0	3	0
13	M	<i>Theora lata</i>	1	0.02					1	0.02
14	C	<i>Callianassa japonica</i>	1	0.01					1	0.01
15	C	<i>Neoxenophthalmus obscurus</i>	2	0.19	2	0.16			4	0.35
16	C	<i>Typhlocarcinops denticarpus</i>	1	0.08			1	0.09	2	0.17
17	C	<i>Typhlocarcinus villosus</i>			2	0.08			2	0.08
Total			12	0.31	6	0.2565	11	0.1	29	0.67

Notes :

- (1) P = Polychaeta, C = Crustacea, M = Mollusca, Sp = Sipuncula, N = Nemertea  
 (2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 30 Benthic Communities at SKO-B3 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Eunice indica</i>	3	0.01	1	0.03	1	0.01	5	0.04
2	P	<i>Glycera alba</i>					1	0	1	0
3	P	<i>Glycera chirori</i>	2	0.03					2	0.03
4	P	<i>Glycera tridactyla</i>			1	0.05			1	0.05
5	P	<i>Glycinde gurjanovae</i>	1	0					1	0
6	P	<i>Linopherus paucibranchiata</i>					1	0	1	0
7	P	<i>Loimia ingens</i>	1	0.02	1	0.04			2	0.05
8	P	<i>Magelona</i> sp.			5	0	3	0	8	0.01
9	P	<i>Marphysa stragulum</i>	4	0.05	3	0.03	1	0.01	8	0.09
10	P	<i>Mediomastus</i> sp.	1	0					1	0
11	P	<i>Onuphis eremita</i>	2	0					2	0
12	P	<i>Owenia fusiformis</i>			1	0.01			1	0.01
13	P	<i>Phyllodoce</i> sp. 1			1	0			1	0
14	P	<i>Terebellides stroemii</i>	1	0.01	1	0			2	0.02
15	N	Nemertean spp.					1	0.02	1	0.02
16	M	<i>Dosinia</i> sp. 1			1	0.08			1	0.08
17	M	<i>Mactra cuneata</i>	1	0.07					1	0.07
18	F	<i>Cryptocentrus filifer</i>	1	0					1	0
19	F	<i>Muraenichthys</i> sp.	1	0.02					1	0.02
20	Ec	<i>Amphioplus laevis</i>					1	0.01	1	0.01
21	Ec	<i>Amphioplus lucidus</i>					1	0.13	1	0.13
22	Ec	<i>Amphiura hexactis</i>	2	0	2	0.02			4	0.03
23	Ec	<i>Ophiocnemis marmorata</i>	3	0.21					3	0.21
24	Sp	<i>Apionsoma trichocephalus</i>					1	0	1	0
25	C	Amphipod spp.			1	0			1	0
26	C	<i>Apseudes</i> sp.					2	0.04	2	0.04
27	C	<i>Betaeus</i> sp.	2	0.04					2	0.04

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
28	C	<i>Eucrate crenata</i>					2	0.05	2	0.05
29	C	<i>Raphidopus ciliatus</i>	1	0.01			1	0.05	2	0.06
30	C	<i>Typhlocarcinus villosus</i>	1	0.13	3	0.4	2	0.25	6	0.78
31	C	<i>Xenopthalmus pinnotheroides</i>	4	0.72	1	0.81	3	0.33	8	1.85
Total			31	1.3243	22	1.4743	21	0.8971	74	3.7

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca, N = Nemertea, Sp = Sipuncula, Ec = Echinodermata, F= Fish

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

**Table 31 Benthic Communities at SKO-B4 in Dry Season**

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
1	P	<i>Aglaophamus dibranchis</i>	1	0	2	0			3	0
2	P	<i>Cirriformia</i> sp.	3	0	2	0	1	0	6	0.01
3	P	<i>Eunice indica</i>	3	0.07			2	0.04	5	0.11
4	P	<i>Glycera alba</i>			1	0	1	0.01	2	0.01
5	P	<i>Glycinde gurjanovae</i>	1	0	1	0			2	0
6	P	<i>Harmothoe imbricata</i>			1	0.01			1	0.01
7	P	<i>Linopherus paucibranchiata</i>			2	0			2	0
8	P	<i>Lumbrineris shiinoi</i>			1	0			1	0
9	P	<i>Magelona</i> sp.	1	0	12	0	1	0	14	0.01
10	P	<i>Marphysa sanguinea</i>			2	0.02			2	0.02
11	P	<i>Marphysa stragulum</i>			2	0.04	1	0	3	0.04
12	P	<i>Mediomastus</i> sp.			1	0			1	0
13	P	<i>Notomastus</i> sp.			1	0	1	0.02	2	0.02
14	P	<i>Onuphis eremita</i>	1	0	3	0			4	0
15	P	<i>Ophelina acuminata</i>			1	0			1	0

No	Groups <sup>(1)</sup>	Species	1		2		3		Total	
			Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>	Ind.	Wet wt. <sup>(2)</sup>
			(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.1m <sup>2</sup> )	(g/0.1m <sup>2</sup> )	(/0.3m <sup>2</sup> )	(g/0.3m <sup>2</sup> )
16	P	<i>Ophiodromus angutifrons</i>			1	0			1	0
17	P	<i>Paraonella</i> sp.			1	0			1	0
18	P	<i>Paraprionospio pinnata</i>					1	0	1	0
19	P	<i>Phylo ornatus</i>			1	0			1	0
20	P	<i>Poecilochaetus</i> sp. 1			1	0			1	0
21	P	<i>Prionospio ehlersi</i>			3	0			3	0
22	P	<i>Prionospio malmgreni</i>					2	0	2	0
23	P	<i>Sigambra hanaokai</i>	1	0					1	0
24	M	<i>Clausinella calophylla</i>					1	0.81	1	0.81
25	M	<i>Mactra cuneata</i>	1	0.11	1	0.02			2	0.12
26	M	<i>Solen dunkerianus</i>			1	0.03			1	0.03
27	Eh	<i>Thalassema sabinum</i>	1	0.05	4	0.17			5	0.22
28	Sp	<i>Apionsoma trichocephalus</i>	5	0	21	0.01	2	0	28	0.02
29	Sp	<i>Golfingia vulgaris</i>	1	0.03					1	0.03
30	Ec	<i>Amphioplus lucidus</i>			1	0.02			1	0.02
31	Ec	<i>Amphiura hexactis</i>	1	0.03					1	0.03
32	C	<i>Apseudes</i> sp.			3	0			3	0
33	C	<i>Betaeus</i> sp.	1	0	1	0.03			2	0.04
34	C	<i>Clorida latreillei</i>	1	0.01					1	0.01
35	C	<i>Diastylis</i> sp.			1	0			1	0
36	C	<i>Pinnixa penultipedalis</i>			1	0			1	0
37	C	<i>Raphidopus ciliatus</i>					1	0.12	1	0.12
38	C	<i>Typhlocarcinus villosus</i>	2	0.55	1	0.02			3	0.57
39	C	<i>Xenophthalmus pinnotheroides</i>	5	1.71	2	0.24	4	0.69	11	2.64
40	Am	<i>Branchiostoma belcheri</i>			1	0	1	0	2	0
Total			29	2.5635	77	0.6399	19	1.7034	125	4.91

Notes :

(1) P = Polychaeta, C = Crustacea, M = Mollusca, Sp = Sipuncula, Ec = Echinodermata, Eh = Echiura, Am = Amphioxus

(2) Biomass = 0.00 g / 0.1m<sup>2</sup> : The specimen with total biomass less than 0.01 g / 0.1m<sup>2</sup>

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