

Fig. 8 Average total abundance of macrobenthic fauna found at all sampling stations around the Map-Ta-Phut Deep Sea Port in June and December 2000

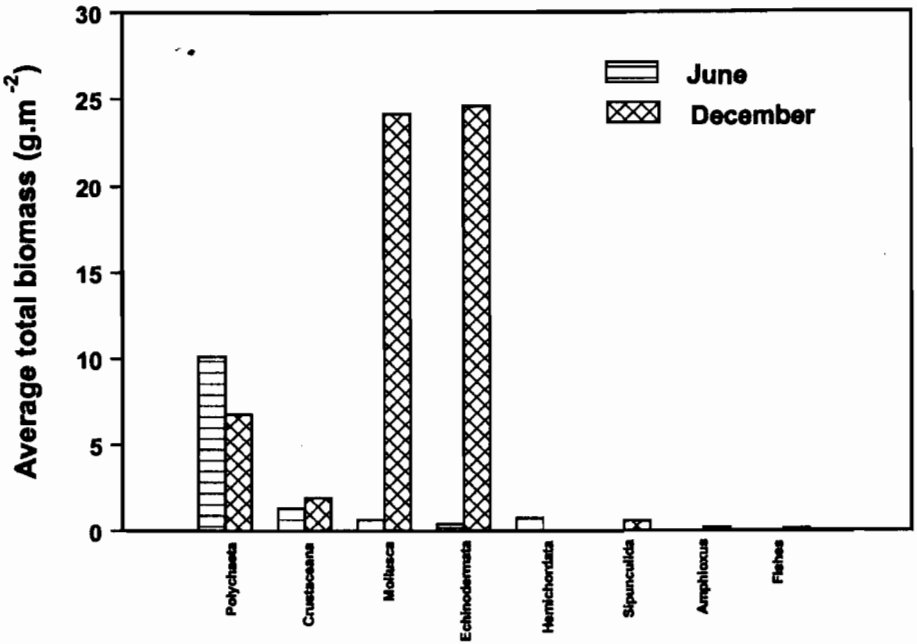


Fig. 9 Average total biomass of macrobenthic fauna found at all sampling stations around the Map-Ta-Phut Deep Sea Port in June and December 2000

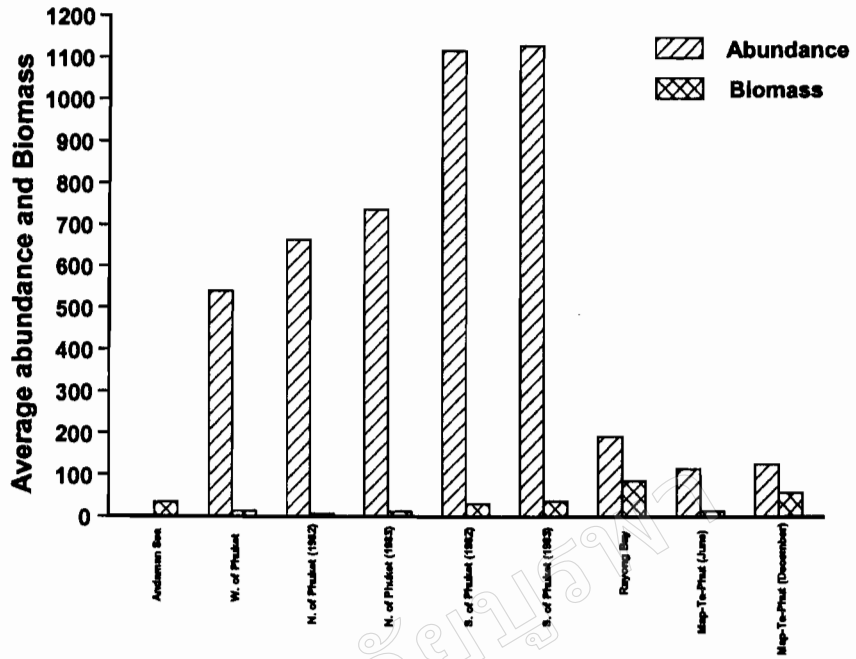


Fig. 10 Average abundance and biomass of macrobenthic fauna from the Andaman Sea, the coast of Phuket, Rayong Bay and around the Map-Ta-Phut Deep Sea Port (in June and December)



**Table 1.** Descriptions of stations for benthos samplings around the Map-Ta-Phut Deep Sea Port in June and December 2000.

Station	East	North	Depth (m)		Transparency		Salinity (ppt)		Sediment characteristic
			June	December	June	December	June	December	
1	733 500	1400 000	10	12	1.8	4	30	34	Black colour sediment with fine sand and a high mud content
2	734 500	1399 000	5	6	1.8	3	29	34	Yellow sand with shell fractions
3	734 500	1397 000	12	12	4	3	30	33	Black colour sediment with fine sand and mud
4	733 000	1397 000	12	15	4	4	31	35	Black colour sediment with fine sand and mud
5	733 000	1396 000	14	18	4	>15	32	34	Black colour sediment with fine sand and mud
6	734 500	1396 000	14	19	4.5	>15	32	35	Black colour sediment with fine sand and a high mud content
7	736 000	1396 000	14	19	4	15	32	32	Black colour sediment with fine sand and a high mud content
8	736 000	1397 000	8	8	2.5	3	32	33	Yellow sand with shell fractions

**Table 2.** Abundance ( $\text{ind.m}^{-2}$ ) and biomass ( $\text{g.m}^{-2}$ ) of macrobenthic fauna at each sampling station around the Map-Ta-Phut Deep Sea Port in June 2000

Station	Polychaeta		Crustaceana		Mollusca		Echinodermata		Hemichordata	
	Abundance ( $\text{ind.m}^{-2}$ )	Biomass ( $\text{g.m}^{-2}$ )	Abundance ( $\text{ind.m}^{-2}$ )	Biomass ( $\text{g.m}^{-2}$ )	Abundance ( $\text{ind.m}^{-2}$ )	Biomass ( $\text{g.m}^{-2}$ )	Abundance ( $\text{ind.m}^{-2}$ )	Biomass ( $\text{g.m}^{-2}$ )	Abundance ( $\text{ind.m}^{-2}$ )	Biomass ( $\text{g.m}^{-2}$ )
1	172	0.656	6	1.070	-	-	18	0.889	-	-
2	99	4.012	6	0.230	-	-	18	0.232	-	-
3	80	15.173	12	4.129	-	-	43	1.917	-	-
4	117	7.288	-	-	6	0.313	-	-	-	-
5	136	24.283	18	0.310	6	0.422	-	-	6	6.067
6	37	0.384	12	3.369	-	-	-	-	-	-
7	62	29.206	12	1.168	-	-	-	-	-	-
8	-	-	6	0.336	37	4.409	12	0.206	-	-

Table 3. Abundance (ind.m<sup>-2</sup>) and biomass (g.m<sup>-2</sup>) of macrobenthic fauna at each sampling station around the Map-Ta-Phut Deep Sea

Port in December 2000

Station	Polychaeta		Crustaceana		Mollusca		Echinodermata		Sipunculida		Amphioxus		Fishes	
	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )	Abundance (ind.m <sup>-2</sup> )	Biomass (g.m <sup>-2</sup> )
1	6	0.020	0	0	0	0	0	0	0	0	0	0	0	0
2	99	13.16	6	1.76	37	146.83	74	97.05	0	0	0	0.15	0	0
3	111	9.41	25	3.61	6	0.76	12	0.13	2	4.81	12	0.38	0	0
4	17	7.54	43	2.27	0	0	12	97.68	0	0	31	0.64	6	1.24
5	12	12.73	37	2.21	6	4.17	6	0.09	0	0	0	0	0	0
6	37	1.36	12	4.71	6	1.89	0	0	0	0	0	0	0	0
7	93	8.07	12	0.06	37	38.01	6	0	0	0	12	0.05	0	0
8	154	2.00	37	0.68	18	1.30	25	1.57	0	0	6	0.50	0	0

**Table 4** Total abundance (ind.m<sup>-2</sup>), biomass (g.m<sup>-2</sup>), total family, total individual and shannon index of all macrobenthic fauna at each sampling station around the Map-Ta-Phut Deep Sea Port in June and December 2000

Station	Total abundance (ind.m <sup>-2</sup> )		Total biomass (g.m <sup>-2</sup> )		Total family		Total individual		Shannon index	
	June	December	June	December	June	December	June	December	June	December
1	196	6	2.61	0.02	5	1	32	1	0.72	0
2	123	216	4.47	258.95	7	13	20	29	1.73	2.18
3	135	168	21.22	19.10	6	17	19	24	1.62	2.70
4	123	109	7.60	109.37	8	12	19	27	1.88	2.35
5	166	61	31.08	19.20	13	12	27	17	2.24	2.36
6	49	55	3.75	7.94	9	5	9	5	2.20	1.43
7	74	160	30.37	46.19	8	13	11	21	1.97	2.38
8	55	240	4.95	6.05	11	18	17	36	2.23	2.73

**Table 5** Average total abundance ( $\text{ind.m}^{-2}$ ) and biomass ( $\text{gm}^{-2}$ ) of macrobenthic fauna found at all sampling stations around the Map-Ta-Phut Deep Sea Port in June and December 2000

Taxon	Abundance				Biomass			
	June		December		June		December	
	$\text{Ind.m}^{-2}$	%	$\text{Ind.m}^{-2}$	%	$\text{g.m}^{-2}$	%	$\text{g.m}^{-2}$	%
Polychaeta	$88 \pm 55$	76.3	$66 \pm 55$	52.1	$10.12 \pm 11.48$	76.4	$6.79 \pm 5.11$	11.63
Crustacea	$9 \pm 5$	7.8	$21 \pm 16$	16.9	$1.33 \pm 1.56$	10.0	$1.91 \pm 1.67$	3.28
Mollusca	$6 \pm 13$	5.3	$14 \pm 15$	10.8	$0.64 \pm 1.53$	4.8	$24.12 \pm 51.23$	41.33
Echinodermata	$11 \pm 15$	9.9	$17 \pm 24$	13.3	$0.40 \pm 0.68$	3.1	$24.57 \pm 44.94$	42.10
Hemichordata	$1 \pm 2$	0.6	0	0	$0.76 \pm 2.14$	5.7	0	0
Sipunculida	0	0	<1	0.2	0	0	$0.60 \pm 1.70$	1.03
Amphioxus	0	0	$8 \pm 11$	6.0	0	0	$0.21 \pm 0.26$	0.37
Fishes	0	0	$1 \pm 2$	0.6	0	0	$0.15 \pm 0.44$	0.27
<b>Total fauna</b>	<b><math>115 \pm 36</math></b>	<b>100</b>	<b><math>127 \pm 23</math></b>	<b>100</b>	<b><math>13.26 \pm 4.19</math></b>	<b>100</b>	<b><math>58.35 \pm 11.17</math></b>	<b>100</b>

Table 6. Family diversity of macrobenthic fauna at each sampling station around the Map-Ta-Phut Deep Sea Port in June 2000

Class	Family	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8	
Polychaeta	Nereidae	1	5	-	-	-	1	1	1	
	Pilargidae	1	-	-	-	-	-	-	-	
	Trochochaetidae	26	-	-	-	-	-	1	1	
	Glyceridae	-	1	3	3	2	-	-	-	
	Maldamidae	-	6	-	3	1	1	-	-	
	Onuphidae	-	3	-	1	2	1	-	-	
	Spionidae	-	1	-	1	1	1	1	1	
	Capitellidae	-	-	4	4	2	-	1	1	
	Orbinidae	-	-	1	-	9	-	-	-	
	Terebellidae	-	-	2	5	2	1	3	3	
Crustacea	Eunicidae	-	-	-	1	3	1	-	-	
	Pectinariidae	-	-	-	-	-	1	1	-	
	Syllidae	-	-	-	-	-	-	-	-	
	Fire worm	-	-	-	-	1	-	-	1	
	Porcellanidae	1	-	-	-	-	-	-	-	
	Grapidae	-	1	-	-	-	-	-	-	
	Porcellanidae	-	-	2	-	-	-	-	-	
	Xanthidae	-	-	-	-	1	-	-	-	
	Palaeomonidae	-	-	-	-	1	-	-	-	
	Alphacidae	-	-	-	-	1	-	-	-	
Mollusca	Squilloidae	-	-	-	-	-	1	-	-	
	Xanthidae	-	-	-	-	-	1	-	-	
	Isopoda	-	-	-	-	-	-	2	-	
	Goneplacidae	-	-	-	-	-	-	-	1	
	Veneridae	-	-	-	1	-	-	1	1	
	Cerithidae	-	-	-	-	1	-	-	1	
	Donacidae	-	-	-	-	-	-	-	4	
	Echinodermata	Brittle star	3	3	7	-	-	-	-	-
		Heart urchin	-	-	-	-	-	-	-	2
	Hemichordata	Acorn worm	-	-	-	-	1	-	-	-

Table 7. Family diversity of macrobenthic fauna at each sampling station around the Map-Ta-Phut Deep Sea Port in December 2000

Class	Family	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8
Polychaeta	Nereididae	1	1	-	-	1	-	-	4
	Glyceridae	-	5	1	1	2	-	1	4
	Malaidamidae	-	-	1	-	-	-	-	-
	Omphalidae	-	-	-	2	-	-	-	-
	Spionidae	-	-	-	2	-	1	1	1
	Cyathodidae	-	4	2	3	-	-	2	-
	Orbiolidae	-	-	3	3	4	2	1	2
	Terebellidae	-	-	1	2	-	-	-	5
	Famidae	-	1	2	-	-	-	-	-
	Pectinariidae	-	1	-	-	-	-	-	-
	Amphilemidae	-	-	-	-	1	-	-	1
	Chironomidae	-	-	1	-	-	-	-	-
	Aphroditiidae	-	1	-	-	-	-	-	-
	Echiuridae	-	-	-	-	-	-	-	1
	Ophelidae	-	-	-	-	-	-	-	1
	Nephtyidae	-	-	-	2	-	-	-	4
	Fire worm	-	-	-	-	-	1	-	1
Crustacea	Pertusidae	-	-	1	-	2	1	-	-
	Polaeonemidae	-	-	-	-	1	-	-	1
	Alpheidae	-	-	-	5	2	1	2	3
	Penaeidae	-	-	2	-	-	-	-	-
	Amphipoda	-	-	-	-	-	-	-	1
	Coeloplacidae	-	1	1	2	1	-	-	-
	Yesseriidae	-	2	1	-	-	1	3	1
	Sirobaccas	-	1	-	-	-	-	-	-
	Marginedellidae	-	-	-	-	-	-	1	1
	Mytilacean	-	-	-	-	1	-	-	1
	Mallicidae	-	-	-	-	-	-	1	-
	Danaoidea	-	3	-	-	-	-	1	1
	Echinozoaria	-	11	2	1	1	1	1	2
	Sea cucumber	-	-	-	-	1	-	-	-
	Emerit terrella	-	1	-	-	-	-	-	2
	Sipunculid	-	-	2	-	-	-	-	-
	Cephalochordata	-	-	2	5	-	-	-	1
Fish	-	-	1	-	-	-	-	-	

**Table 8** The average abundance (ind.m<sup>-2</sup>) and biomass (g. m<sup>-2</sup>) of macrobenthic fauna from the Andaman Sea and upper Gulf of Thailand

Location	Abundance (ind.m <sup>-2</sup> )	Biomass (g. m <sup>-2</sup> )	Sources
Andaman Sea	Not indicated	5.0 – 35.0	Seidenfaden et al, 1968
West Coast of Phuket Island	540	14	Hylleberg et al., 1985
North Coast of Phuket Island (in 1982)	664	7.58	Chatananthawej and Bussarawit, 1987
North Coast of Phuket Island (in 1983)	737	13.01	Chatananthawej and Bussarawit, 1987
South Coast of Phuket Island (in 1982)	1117	30.81	Chatananthawej and Bussarawit, 1987
South Coast of Phuket Island (in 1983)	1129	37.71	Chatananthawej and Bussarawit, 1987
Rayong Bay	191.99	85.75	Saguansin, 1988
Around the Map-Ta-Phut Deep Sea Port (in June)	115	13.3	This study
Around the Map-Ta-Phut Deep Sea Port (in December)	127	58.3	This study



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