DAFTAR PUSTAKA

Bengen DG. 2001. ***Sinopsis Ekosistem dan Sumberdaya Alam Pesisir dan Laut***. Pusat Kajian Sumberdaya Pesisir dan Lautan. Institut Pertanian Bogor. Bogor

Bengen DG. 2002. ***Ekosistem dan Sumberdaya Alam Pesisir****. Pusat Kajian Sumberdaya Pesisir dan Lautan*. Sinopsis. Institut Pertanian Bogor. Bogor.

Daeng, Besse. 2018. Keterkaitan Jenis dan Kerapatan Lamun dengan Tekstur Sedimen di Dusun Biringkassi Desa Sapanang, Kecamatan Binamu, Kabupaten Jeneponto. Universitas Hasanuudin. Makassar

Dahuri, R. 2003. ***Keanekaragaman Hayati Laut Aset Pembangunan Berkelanjutan Indonesia****.* Penerbitan Gramedia Pustaka Utama. Jakarta

Dahuri, R., R. Jacub, P.G. Sapta, dan M.J. Sitepu. 2001. ***Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan Terpadu***. PT. Pradya Paramita, Jakarta. 328hlm.

Den Hartog, C., 1970. ***The Seagrasses of the World. Amsterdam*** : Nort Holland Publishing Company.

Dwintasari. F. 2009. ***Hubungan Ekologis Lamun (seagrass) Terhadap Kelimpahan Keanekaragaman Ikan di Pulau Pramuka Kepulauan Seribu***.(skripsi). Program Studi Manajemen Sumberdaya Perairan, Fakultas Perikanan dan Ilmu Kelautan, Institut Pertanian Bogor. Bogor. Xiii+72 hml.

Fahrudin. 2002. ***Pemanfaatan, Ancaman dan Isu-isu Pengelolaan Ekosistem Padang Lamun***.(Makalah Falsafah Sains). Bogor : Program Pasca Sarjana/S3. Institut Pertanian Bogor.

Fahruddin, M., Yulianda, F., & Setyobudiandi, I., 2017. ***Kerapatan Dan Penutupan Ekosistem Lamun Di Pesisir Desa Bahoi, Sulawesi Utara***. Jurnal Ilmu dan Teknologi Kelautan Tropis, 9(1), 375-383.

Ghazi, Farzan. 2022. ***Pentingnya Lamun untuk Ekosistem Laut***. Jakarta : Elementa Agro Lestari.

Hartati R, Djunaedi A, Haryadi, Mujianto. 2017. ***Struktur Komunitas Padang Lamun di Periran Pulau Kumbang, Kepulauan karimunjawa***. Ilmu Kelautan. 17(4):217-225.

Hemminga, M. A., dan Duarte. C. M. 2000. ***Seagrass Ecology***. Cambridge : Cambridge University Press. Australia

Hutomo, M. & M.H. Azkab. 1987. ***Perairan Lamun di Lingkungan Laut Dangkal***. Osena Vol. XII No.1. LOL-LIPI, Jakarta

Hermawan, UE, Sjafrie, NDM, Supriyadi, IH, Suyarso, Iswari, MY, Anggraini, K, Rahmat. 2017. ***Status Padang Lamun Indonesia 2017***. LIPI. Jakarta.24 p.

Kadi, A. 2006. ***Beberapa Catatan Kehadiran Marga Sargassum di Perairan Indonesia. Bidang Sumberdaya Laut***. Pusat Penelitian Oceanografi Lembaga Ilmu Pengetahuan Indonesia (P2O-LIPI), Jakarta. 71hlm

Kawaroe, M., Nugraha, AH., Juraij, I.A. & Tasabaramo. 2016. ***Seagrass biodiversity at three marine ecoregions of Indonesia Sunda Shelf, Sulawesi Sea, and Banda Sea***. Journal of Biological Diversity.

Khairunnisa., Setyobudiandi, I., & Boer, M. (2018). ***Estimasi Cadangan Karbon pada Lamun di Pesisir Timur Kabupaten Bintan***. Jurnal Ilmu dan Teknologi Kelautan Tropis.

Kiswara, W. (2004), ***Kondisi Padang Lamun (Seagrass) di Perairan Teluk Banten***. Lembaga Penelitian Oseonografi, Lembaga Ilmu Pengetahuan Indonesia. Jakarata

Kordi K. M. G.H (2011). ***Ekosistem Lamun (seagrass): Fungsi, Potensi, dan Pengelolaan.*** Jakarta: Rineka Cipta.

Lee KS, Park JI, Kim YK, Park SR, Kim JH. 2007. ***Recolonization of Zostera Marina Following Destruction Caused by a Red Tide Algal Bloom : The Role of New Shoot Recruitment from Seed Banks***. Mar Ecol Prog Ser

Lisdawati, Ahmad, SA, Siwi, LO. ***Studi Biomassa Lamun (Enhalus acoroides L.) dan (Halodule pinifolia) Berdasarkan Kedalaman Air Laut di Pantai Desa Tanjung Tiram Sulawesi Tenggara***. Biowallacea 5(2) : 864-865

Marhayana S, Irman Halid, Fachri Kurnia Bakti, Ilham Halid. 2021**. *Pengelolaan dan Pola Pemanfaatan Ekosistem Lamun untuk Perikanan Baronang Lingkis Berkelanjutan***. Penebit Deepublish : Yogyakarta. Fakultas Perikanan dan Kelautan. Universitas Airlangga. Surabaya

Muhammad SH, Djainudin Alwi & Mahrudin Fang. 2021. ***Komposisi Dan Keanekaragaman Jenis Lamun Di Perairan Desa Mandiri Kabupaten Pulau Morotai.*** Aurelia Jounal vol.3(1)

Muhammad SH, Iswandi Wahab & Ismawati Alican. 2017. ***Analisis Ekologi Lamun di Pulau Rao, Kecamatan Morotai Selatan Barat, Kabupaten Pulau Morotai***. Jurnal La'ot Ilmu Kelautan vol II no.2

KEPMEN-LH No. 200. 2004. ***Keputusan Menteri Lingkungan Hidup Nomor 200 Tahun 2004***. Kriteria Baku Kerusakan dan Pedoman Penentuan Status Padang Lamun.

Kuriandewa, T.E. 2009. ***Tinjauan Tentang Lamun di Indonesia***. Prosiding Lokakarya Nasional I Pengelolaan Ekosistem Lamun. Jakarta, 18 November 2019

Listiawati, Vina. 2018. ***Peran Lamun Sebagai Bioindikator Kualitas Perairan Pesisir***. Universitas Muhammadiyah Surakarta

Muzambiq, Said & Wahyu Hidayat. 2016. ***Model Sedimentasi Lingkungan Danau Lau Kawar Hasil Erupsi Vulkanik Gunung Sinabung Metode Granularametri Kabupaten Karo, Sumatera Utara***. Teknik Geologi, Institut Tenologi Medan

Naufaldin A. 2016. ***Identifikasi Lamun Menggunakan Metode Transek Kuadran di Perairan Pulau Pramuka, Taman Nasional Laut Kepulauan Seribu***, DKI Jakarta

Newmaster, A.F., K.J. Berg, S. Ragupathy, M. Palanisamy, K. Sambandan, and S.G. Newmaster. 2011. ***Local knowladge and conservation of seagrass in the Tamil Nadu State of India***. J. Of Ethnobiology and Ethnomedicine. 37p.

Pamungkas, Muhammad Wahyu Tri. 2016. ***Studi Perubahan Habitat Padang Lamun Berdasarkan Kualitas Perairan Menggunakan Citra Landsat 8*** (Studi Kasus : Pantai Sanur, Bali). Institut Teknologi Sepuluh Nopember. Surabaya

Pryadi, Muhammad. 2023. ***Hubungan Kondisi Padang Lamun Dengan Kualitas Perairan Di Pulau Sagara, Kabupaten Pangkep***. Makassar ; Universitas Hasanuddin.

Ramily, Y. Bengen, D. Maduppa, H.H. Kawaroe, M. (2018). ***Struktur dan Asosiasi Jenis Lamun di Perairan Pulau-Pulau Hiri, Ternate, Maitara dan Tidore, Maluku Utara***. Jurnal Ilmu dan Teknologi Kelautan Tropis, 10(3), 651-665. Bogor : JITKT

Romimohtarto, K dan Juwana, S. 2009. *Biologi Laut* ***: Ilmu Pengetahuan Tentang Biota Laut***. Djembatan. Jakarta. 540 p.

Rochmady. 2010. ***Rehabilitasi Ekosistem Padang Lamun.*** Program Pascasarjana, Universitas Hasanuddin. Makassar

Sahalessy, Arielno., Laura Siahainenia & Charlota I. Tupan. 2023. ***Struktur Komunitas Lamun dan Bentuk-Bentuk Pemanfaatan Ekosistem Lamun di Negeri Amahai Kabupaten Maluku Tengah***. Jurnal Manajemen Sumberdaya Perairan. Program Studi Manajemen Sumberdaya kelautan dan Pulau-Pulau Kecil, Pascasarjana, Universitas Pattimura

Sahami, Femy M., Sri Nuryatin Hamzah, Citra Panigoro dan Hasim. 2014. ***Lingkungan Perairan dan Produktivitasnya***. Yogyakarta : Deepublish

Satrya, C., Muhammad, Y., Muhandis, S., Beginer, S., Dondy, A., & Fitryah, A. (2012). ***Keragaman Lamun di Teluk Banten*****,** Provinsi Banten. Jurnal Teknologi Perikanan dan Kelautan, 29-34.

Sjafrie N.D.M., Hernawan E.K., Prayudha B., Supriyadi I.H., Iswari M.Y., Rahmat, Angraini K, Rahmawati S. & Suyarso. 2018. ***Status Padang Lamun Ver.2***. Pusat Penelitian Oseanografi Lembaga Ilmu Pengetahuan Indonesia, Jakarta.

Supriharyono. 2000. ***Pelestarian dan Pengelolaan Sumber Daya Alam di Wilayah Pesisir Tropis***. Jakarta : Gramedia Pustaka utama

Supriharyono. 2007. ***Konservasi Ekosistem Sumberdaya Hayati di Wilayah Pesisir dan Laut Tropis***. Yogyakarta : Pustaka Pelajar

Susetiono. 2004. ***Fauna Padang Lamun Tanjung Merah Selat Lembe***. Pusat Penelitian Oseanografi-LIPI. Jakarta

Zulkifli. 2003. ***Pengelolaan dan Pengembangan Ekosistem Padang Lamun Berwawasan Lingkungan Berbasisis Masyarakat dan Berkelanjutan***. Bogor : Institut Pertanian Bogor,

Zulkurniawan, A. 2022***. Pengaruh Kualitas Perairan Terhadap Kondisi Padang Lamun di Pulau Saugi Kabupaten Pangkep***. Makassar ; Universitas Hasanuddin.

Zurba, Nabil. 2018. ***Pengenalan Padang Lamun, Suatu Ekosistem yang Terlupakan*.** Universitas Malikussaleh, Aceh.

LAMPIRAN

Lampiran 1. Hasil Pengamatan Parameter Oseanografi

Stasiun	Ulangan	Suhu (°C)	Salinitas (ppt)	Arus (cm/s)	Kedalaman (cm)
I	Pagi	27	32	0,05	88
	Siang	29	32	0,11	82
	Sore	28	32	0,47	125
	Rata-rata	**28**	**32**	**0,21**	**98**
II	Pagi	26	33	0,07	93
	Siang	29	31	0,19	105
	Sore	28	31	0,32	122
	Rata-rata	**28**	**32**	**0,19**	**107**
III	Pagi	27	31	0,06	81
	Siang	30	32	0,09	108
	Sore	30	30	0,22	128
	Rata-rata	**29**	**31**	**0,12**	**106**

Lampiran 2. Kondisi Padang Lamun Tiap Stasiun Berdasarkan Persen Tutupan

Stasiun	Transek Ulangan	Total %	Rata-rata %	Kondisi
I	1	22,84	32,19	***Agak bagus***
	2	55		
	3	18,75		
II	1	45,22	43,64	***Agak bagus***
	2	53,86		
	3	31,81		
III	1	44,38	52,41	***Bagus***
	2	59,31		
	3	53,52		

Lampiran 3. Hasil Analisis Sedimen Menggunakan Software GRADISTAT V.8 (Stasiun 1)

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 1 (0 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	µm	ϕ
MODE 1:	302.5	1.747
MODE 2:	605.0	0.747
MODE 3:	1200.0	-0.243
D_{10}:	144.4	-1.150
MEDIAN or D_{50}:	552.8	0.855
D_{90}:	2219.8	2.792
(D_{90} / D_{10}):	15.38	-2.427
(D_{90} - D_{10}):	2075.5	3.943
(D_{75} / D_{25}):	4.441	-8.291
(D_{75} - D_{25}):	909.7	2.151

GRAIN SIZE DISTRIBUTION

GRAVEL: 14.5%	COARSE SAND: 21.6%
SAND: 85.4%	MEDIUM SAND: 22.4%
MUD: 0.1%	FINE SAND: 18.9%
	V FINE SAND: 2.4%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 14.5%	V FINE SILT: 0.0%
V COARSE SAND: 20.1%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	818.0	522.5	0.936	496.4	1.010	Medium Sand	0,496 mm
SORTING (σ):	747.6	2.625	1.393	2.662	1.412	Poorly Sorted	
SKEWNESS (Sk):	1.163	0.009	-0.009	-0.064	0.064	Symmetrical	
KURTOSIS (K):	3.114	1.971	1.971	0.810	0.810	Platykurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 1 (50 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	µm	ϕ
MODE 1:	605.0	0.747
MODE 2:	1200.0	-0.243
MODE 3:	2400.0	-1.243
D_{10}:	162.4	-1.252
MEDIAN or D_{50}:	656.6	0.607
D_{90}:	2382.1	2.622
(D_{90} / D_{10}):	14.67	-2.094
(D_{90} - D_{10}):	2219.7	3.875
(D_{75} / D_{25}):	4.162	-4.152
(D_{75} - D_{25}):	1002.0	2.057

GRAIN SIZE DISTRIBUTION

GRAVEL: 20.8%	COARSE SAND: 25.1%
SAND: 79.1%	MEDIUM SAND: 17.0%
MUD: 0.1%	FINE SAND: 12.3%
	V FINE SAND: 1.0%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 20.8%	V FINE SILT: 0.0%
V COARSE SAND: 23.6%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	1005.5	682.9	0.550	720.3	0.473	Coarse Sand	0,720 mm
SORTING (σ):	798.6	2.523	1.335	2.632	1.396	Poorly Sorted	
SKEWNESS (Sk):	0.795	-0.279	0.279	0.036	-0.036	Symmetrical	
KURTOSIS (K):	2.235	2.116	2.116	0.838	0.838	Platykurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 1 (100 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	µm	ϕ
MODE 1:	605.0	0.747
MODE 2:	302.5	1.747
MODE 3:	1200.0	-0.243
D_{10}:	144.1	-1.083
MEDIAN or D_{50}:	536.4	0.899
D_{90}:	2118.2	2.795
(D_{90} / D_{10}):	14.70	-2.581
(D_{90} - D_{10}):	1974.1	3.877
(D_{75} / D_{25}):	4.331	-11.985
(D_{75} - D_{25}):	861.0	2.115

GRAIN SIZE DISTRIBUTION

GRAVEL: 12.1%	COARSE SAND: 23.1%
SAND: 87.8%	MEDIUM SAND: 22.5%
MUD: 0.1%	FINE SAND: 21.1%
	V FINE SAND: 1.6%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.1%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 12.1%	V FINE SILT: 0.0%
V COARSE SAND: 19.5%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	764.4	495.5	1.013	482.2	1.052	Medium Sand	0,482 mm
SORTING (σ):	707.7	2.549	1.350	2.630	1.395	Poorly Sorted	
SKEWNESS (Sk):	1.316	0.090	-0.090	-0.057	0.057	Symmetrical	
KURTOSIS (K):	3.644	1.994	1.994	0.815	0.815	Platykurtic	

Lampiran 4. Hasil Analisis Sedimen Menggunkan Software GRADISTAT V.8 (Stasiun 2)

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 2 (0 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	µm	ϕ
MODE 1:	302.5	1.747
MODE 2:	605.0	0.747
MODE 3:	152.5	2.737
D_{10}:	142.5	-1.004
MEDIAN or D_{50}:	332.6	1.588
D_{90}:	2006.2	2.811
(D_{90} / D_{10}):	14.08	-2.798
(D_{90} - D_{10}):	1863.7	3.815
(D_{75} / D_{25}):	2.448	3.085
(D_{75} - D_{25}):	385.0	1.291

GRAIN SIZE DISTRIBUTION

GRAVEL: 10.1%	COARSE SAND: 23.5%
SAND: 89.7%	MEDIUM SAND: 39.2%
MUD: 0.2%	FINE SAND: 12.7%
	V FINE SAND: 5.3%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.2%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 10.1%	V FINE SILT: 0.0%
V COARSE SAND: 9.1%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	635.5	416.4	1.264	398.7	1.327	Medium Sand	0,399 mm
SORTING (σ):	658.4	2.408	1.268	2.647	1.404	Poorly Sorted	
SKEWNESS (Sk):	1.866	0.312	-0.312	0.239	-0.239	Coarse Skewed	
KURTOSIS (K):	5.348	2.794	2.794	1.511	1.511	Very Leptokurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 2 (50 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Moderately Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	µm	ϕ
MODE 1:	605.0	0.747
MODE 2:	302.5	1.747
MODE 3:	1200.0	-0.243
D_{10}:	176.2	-0.271
MEDIAN or D_{50}:	513.0	0.963
D_{90}:	1206.6	2.505
(D_{90} / D_{10}):	6.847	-9.245
(D_{90} - D_{10}):	1030.4	2.776
(D_{75} / D_{25}):	2.257	2.874
(D_{75} - D_{25}):	360.7	1.174

GRAIN SIZE DISTRIBUTION

GRAVEL: 5.9%	COARSE SAND: 37.6%
SAND: 93.8%	MEDIUM SAND: 36.7%
MUD: 0.3%	FINE SAND: 9.4%
	V FINE SAND: 0.9%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.3%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 5.9%	V FINE SILT: 0.0%
V COARSE SAND: 9.2%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	606.4	457.4	1.129	456.6	1.131	Medium Sand	0,457 mm
SORTING (σ):	528.6	2.025	1.018	1.918	0.940	Moderately Sorted	
SKEWNESS (Sk):	2.300	0.290	-0.290	-0.150	0.150	Fine Skewed	
KURTOSIS (K):	8.089	3.406	3.406	1.347	1.347	Leptokurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 2 (100 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Coarse Sand

	µm	ϕ
MODE 1:	605.0	0.747
MODE 2:	302.5	1.747
MODE 3:	1200.0	-0.243
D_{10}:	252.0	-0.452
MEDIAN or D_{50}:	534.2	0.904
D_{90}:	1368.3	1.989
(D_{90} / D_{10}):	5.430	-4.396
(D_{90} - D_{10}):	1116.3	2.441
(D_{75} / D_{25}):	2.334	3.248
(D_{75} - D_{25}):	392.0	1.223

GRAIN SIZE DISTRIBUTION

GRAVEL: 9.2%	COARSE SAND: 35.1%
SAND: 90.8%	MEDIUM SAND: 34.1%
MUD: 0.0%	FINE SAND: 8.5%
	V FINE SAND: 0.8%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 9.2%	V FINE SILT: 0.0%
V COARSE SAND: 12.4%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	697.5	508.7	0.975	550.1	0.862	Coarse Sand	0,550 mm
SORTING (σ):	617.3	2.122	1.085	2.187	1.129	Poorly Sorted	
SKEWNESS (Sk):	1.831	0.346	-0.346	0.067	-0.067	Symmetrical	
KURTOSIS (K):	5.468	2.798	2.798	1.327	1.327	Leptokurtic	

Lampiran 5. Hasil Analisis Sedimen Menggunakan Software GRADISTAT V.8 (Stasiun 3)

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 3 (0 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	µm	ϕ
MODE 1:	302.5	1.747
MODE 2:	605.0	0.747
MODE 3:	152.5	2.737
D_{10}:	144.7	-1.067
MEDIAN or D_{50}:	329.7	1.601
D_{90}:	2094.6	2.789
(D_{90} / D_{10}):	14.48	-2.615
(D_{90} - D_{10}):	1949.9	3.856
(D_{75} / D_{25}):	2.577	3.379
(D_{75} - D_{25}):	411.1	1.366

GRAIN SIZE DISTRIBUTION

GRAVEL: 11.6%	COARSE SAND: 20.4%
SAND: 88.3%	MEDIUM SAND: 37.3%
MUD: 0.2%	FINE SAND: 17.6%
	V FINE SAND: 2.8%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.2%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 11.6%	V FINE SILT: 0.0%
V COARSE SAND: 10.2%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	665.6	426.9	1.228	402.8	1.312	Medium Sand	0,403 mm
SORTING (σ):	696.0	2.448	1.292	2.567	1.360	Poorly Sorted	
SKEWNESS (Sk):	1.698	0.439	-0.439	0.333	-0.333	Very Coarse Skewed	
KURTOSIS (K):	4.601	2.523	2.523	1.265	1.265	Leptokurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 3 (50 M)** ANALYST & DATE: ,

SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand

SEDIMENT NAME: Very Fine Gravelly Medium Sand

	µm	ϕ
MODE 1:	302.5	1.747
MODE 2:	152.5	2.737
MODE 3:	605.0	0.747
D_{10}:	133.5	-0.268
MEDIAN or D_{50}:	279.7	1.838
D_{90}:	1204.5	2.905
(D_{90} / D_{10}):	9.021	-10.823
(D_{90} - D_{10}):	1071.0	3.173
(D_{75} / D_{25}):	2.252	1.780
(D_{75} - D_{25}):	196.2	1.171

GRAIN SIZE DISTRIBUTION

GRAVEL: 7.4%	COARSE SAND: 11.1%
SAND: 91.8%	MEDIUM SAND: 37.7%
MUD: 0.8%	FINE SAND: 34.1%
	V FINE SAND: 3.0%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.8%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 7.4%	V FINE SILT: 0.0%
V COARSE SAND: 5.9%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	483.4	303.9	1.718	296.0	1.756	Medium Sand	0,296 mm
SORTING (σ):	598.6	2.348	1.231	2.259	1.175	Poorly Sorted	
SKEWNESS (Sk):	2.435	0.898	-0.898	0.280	-0.280	Coarse Skewed	
KURTOSIS (K):	7.891	3.465	3.465	1.448	1.448	Leptokurtic	

SAMPLE STATISTICS

SAMPLE IDENTITY: **Stasiun 3 (100 M)** ANALYST & DATE: ,

SAMPLE TYPE: Bimodal, Moderately Well Sorted TEXTURAL GROUP: Sandy Gravel

SEDIMENT NAME: Sandy Very Fine Gravel

	µm	ϕ
MODE 1:	2400.0	-1.243
MODE 2:	1200.0	-0.243
MODE 3:		
D_{10}:	1048.7	-1.412
MEDIAN or D_{50}:	2174.6	-1.121
D_{90}:	2662.0	-0.069
(D_{90} / D_{10}):	2.538	0.049
(D_{90} - D_{10}):	1613.2	1.344
(D_{75} / D_{25}):	1.956	0.257
(D_{75} - D_{25}):	1205.9	0.968

GRAIN SIZE DISTRIBUTION

GRAVEL: 66.6%	COARSE SAND: 4.4%
SAND: 33.4%	MEDIUM SAND: 1.1%
MUD: 0.0%	FINE SAND: 0.5%
	V FINE SAND: 0.1%
V COARSE GRAVEL: 0.0%	V COARSE SILT: 0.0%
COARSE GRAVEL: 0.0%	COARSE SILT: 0.0%
MEDIUM GRAVEL: 0.0%	MEDIUM SILT: 0.0%
FINE GRAVEL: 0.0%	FINE SILT: 0.0%
V FINE GRAVEL: 66.6%	V FINE SILT: 0.0%
V COARSE SAND: 27.3%	CLAY: 0.0%

	METHOD OF MOMENTS			FOLK & WARD METHOD			
	Arithmetic	Geometric	Logarithmic	Geometric	Logarithmic	Description	
	µm	µm	ϕ	µm	ϕ		
MEAN ($\bar{x}$):	1956.0	1768.7	-0.823	1851.0	-0.888	Very Coarse Sand	1,851 mm
SORTING (σ):	646.9	1.618	0.695	1.529	0.612	Moderately Well Sorted	
SKEWNESS (Sk):	-0.945	-2.158	2.158	-0.634	0.634	Very Fine Skewed	
KURTOSIS (K):	2.356	9.661	9.661	0.878	0.878	Platykurtic	

Lampiran 6. Hasil Ayakan Sedimen Menggunakan Ayakan Mesh

	Aperture (microns)	Class Weight Retained (g or %) in Different Samples								
	Sample Identity:	St.1 (0 M)	St.1 (50 M)	St.1 (100 M)	St.2 (0 M)	St.2 (50 M)	St.2 (100 M)	St.3 (0 M)	St.3 (50 M)	St.3 (100 M)
	Analyst:									
	Date:									
	Initial Sample Weight:									
	90000									
	63000									
	45000									
	31500									
	22400									
	16000									
	11200									
	8000									
ukuran	5600									
ayakan	4000									
	2800									
> 2 mm	2000	14,52	20,85	12,09	10,1	5,92	9,17	11,6	6,83	66,68
	1400									
1 mm	1000	20,13	23,63	19,53	9,08	9,26	12,42	10,2	5,5	27,35
	710									
0,5 mm	500	21,65	25,12	23,15	23,55	37,63	35,12	20,38	10,32	4,45
	355									
0,25 mm	250	22,42	17,06	22,58	39,23	36,75	34,19	37,32	34,98	1,06
	180									
0,125 mm	125	18,94	12,37	21,15	12,66	9,4	8,47	17,62	31,7	0,49
	90									
0,063	63	2,41	1,04	1,64	5,28	0,86	0,77	2,79	2,79	0,14
< 0,063	32	0,13	0,1	0,13	0,17	0,3	0,01	0,16	0,77	0,01

Lampiran 7. Komposisi Persen Tutupan Lamun (Stasiun 1)

Transek		Kordinat		Substrat	Nilai Penutupan lamun (%)				TOTAL
U	M	Lat	Long		Kotak				
					1	2	3	4	
1	0				65	40	45	15	41,25
	10				10	10	10	10	10
	20				0	0	0	0	0
	30				0	0	0	0	0
	40				10	10	10	30	15
	50				15	20	5	10	12,5
	60				70	70	70	50	65
	70				55	55	40	75	56,25
	80				45	15	10	30	25
	90				15	10	20	25	17,5
	100				10	5	5	15	8,75
2	0				70	85	70	90	78,75
	10				5	5	5	5	5
	20				80	65	20	30	48,75
	30				30	35	60	30	38,75
	40				65	40	100	60	66,25
	50				100	80	90	100	92,5
	60				60	100	50	70	70
	70				20	60	40	30	37,5
	80				30	80	20	75	51,25
	90				100	95	80	55	82,5
	100				40	20	35	40	33,75
3	0				15	15	10	5	11,25
	10				0	0	0	0	0
	20				15	0	0	0	3,75
	30				60	40	70	35	51,25
	40				40	30	40	40	37,5
	50				20	30	30	30	27,5
	60				20	15	15	15	16,25
	70				10	40	20	0	17,5
	80				30	15	35	20	25
	90				10	10	10	15	11,25
	100				0	0	0	20	5
Total									
Rata-rata									32,19697
									22,840909
									55
									18,75

Lampiran 8. Nilai Penutupan Lamun Perjenis (Stasiun 1)

Nilai Penutupan Lamun per jenis														
CR					TH					EH				
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
45	30	40	15	32,5	0	0	0	0	0	20	10	5	0	8,75
10	10	10	10	10	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	10	10	10	30	15
0	0	0	0	0	0	0	0	0	0	15	20	5	10	12,5
0	0	0	0	0	60	70	70	30	57,5	10	0	0	20	7,5
0	0	0	0	0	50	50	35	70	51,25	5	5	5	5	5
0	0	0	0	0	30	0	0	30	15	15	15	10	0	10
0	0	0	0	0	10	5	15	20	12,5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	10	5	5	15	8,75
0	0	0	0	0	40	60	40	50	47,5	30	25	30	40	31,25
0	0	0	0	0	5	5	5	5	5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	80	65	20	30	48,75
0	0	0	0	0	10	0	20	10	10	20	35	40	20	28,75
0	0	0	0	0	30	20	20	20	22,5	35	20	80	40	43,75
0	0	0	0	0	80	20	15	20	33,75	20	60	75	80	58,75
0	0	0	0	0	60	80	50	70	65	0	20	0	0	5
0	0	0	0	0	20	30	40	30	30	0	30	0	0	7,5
0	0	0	0	0	30	60	20	35	36,25	0	20	0	40	15
0	0	0	0	0	50	75	60	35	55	50	20	20	20	27,5
0	0	0	0	0	20	20	35	30	26,25	20	0	0	10	7,5
0	0	0	0	0	0	0	0	0	0	15	15	10	5	11,25
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	15	0	0	0	3,75
0	0	0	0	0	50	40	70	30	47,5	10	0	0	5	3,75
0	0	0	0	0	20	15	30	40	26,25	20	15	10	0	11,25
0	0	0	0	0	0	0	0	0	0	20	30	30	30	27,5
0	0	0	0	0	0	0	0	0	0	20	15	15	15	16,25
0	0	0	0	0	0	0	0	0	0	10	40	20	0	17,5
0	0	0	0	0	20	15	35	20	22,5	10	0	0	0	2,5
0	0	0	0	0	10	10	10	15	11,25	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	20	5
				1,2878788					17,424242					13,484848
124					63					51				

Lampiran 9. Tegakan Lamun Perjenis (Stasiun 1)

Tegakan lamun per jenis														
CR					TH					EH				
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
40	36	45	20	35,25	0	0	0	0	0	7	4	2	0	3,25
12	12	14	12	12,5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	4	3	3	9	4,75
0	0	0	0	0	0	0	0	0	0	6	8	2	4	5
0	0	0	0	0	29	35	36	14	28,5	3	0	0	7	2,5
0	0	0	0	0	30	33	16	36	28,75	2	2	3	4	2,75
0	0	0	0	0	15	0	0	12	6,75	6	7	3	0	4
0	0	0	0	0	8	3	7	9	6,75	2	2	3	3	2,5
0	0	0	0	0	0	0	0	0	0	3	2	3	6	3,5
0	0	0	0	0	20	30	23	29	25,5	9	8	10	13	10
0	0	0	0	0	3	3	3	3	3	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	30	21	7	9	16,75
0	0	0	0	0	6	0	9	7	5,5	8	12	14	7	10,25
0	0	0	0	0	14	8	6	9	9,25	12	8	28	15	15,75
0	0	0	0	0	37	8	5	7	14,25	7	20	26	29	20,5
0	0	0	0	0	28	45	24	32	32,25	8	9	0	0	4,25
0	0	0	0	0	9	14	18	14	13,75	0	9	0	0	2,25
0	0	0	0	0	13	26	8	18	16,25	0	7	0	13	5
0	0	0	0	0	25	36	25	16	25,5	18	8	8	9	10,75
0	0	0	0	0	10	12	19	14	13,75	8	0	0	4	3
0	0	0	0	0	0	0	0	24	6	3	4	2	1	2,5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	4	0	0	0	1
0	0	0	0	0	30	25	39	14	27	3	0	0	0	0,75
0	0	0	0	0	12	9	13	23	14,25	8	5	3	0	4
0	0	0	0	0	0	0	0	0	0	7	9	9	8	8,25
0	0	0	0	0	0	0	0	0	0	7	4	4	3	4,5
0	0	0	0	0	0	0	0	0	0	4	14	7	0	6,25
0	0	0	0	0	12	8	15	9	11	3	0	0	0	0,75
0	0	0	0	0	5	6	5	7	5,75	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	8	2
191				1,4469697	1175				8,9015152	627				4,75

Lampiran 10. Data Lamun Stasiun 1

JENIS LAMUN	JUMLAH PENUTUPAN	PENUTUPAN JENIS	PENUTUPAN RELATIF
Cymodocea rotundata	0	1,29	4,00
Thalassia hemprichii	0	17,42	54,12
Enhalus acoroides	0	13,48	41,88
Total	0	32,20	100,00

JENIS LAMUN	PENUTUPAN JENIS
Cymodocea rotundata	1,29
Thalassia hemprichii	17,42
Enhalus acoroides	13,48

20,00
18,00
16,00
14,00
12,00
10,00
8,00
6,00
4,00
2,00
0,00

JENIS LAMUN	JUMLAH TEGAKAN	KERAPATAN JENIS	KERAPATAN RELATIF
Cymodocea rotundata	191	2,32	9,58
Thalassia hemprichii	1175	14,24	58,96
Enhalus acoroides	627	7,60	31,46
Total	**1993**	24,16	100,00
	82,5		

JENIS LAMUN	PLOT YANG DIJUMPAI	FREKUENSI JENIS	FREKUENSI RELATIF
Cymodocea rotundata	8	5,06	5,06
Thalassia hemprichii	69	43,67	43,67
Enhalus acoroides	81	51,27	51,27
Total	158	100,00	100,00
	132		

JENIS LAMUN	KERAPATAN JENIS
Cymodocea rotundata	2,32
Thalassia hemprichii	14,24
Enhalus acoroides	7,60

16,00
14,00
12,00
10,00
8,00
6,00
4,00
2,00
0,00

JENIS LAMUN	Transek 1	Transek 2	Transek 3
Cymodocea rotundata	✓	x	x
Thalassia hemprichii	✓	✓	✓
Enhalus acoroides	✓	✓	✓

JENIS LAMUN	FREKUENSI JENIS
Cymodocea rotundata	5,0633
Thalassia hemprichii	43,6709
Enhalus acoroides	51,26582278

60,00
50,00

Lampiran 11. Komposisi Persen Tutupan Lamun (Stasiun 2)

Transek		Kordinat		Substrat	Nilai Penutupan lamun (%)				TOTAL
					Kotak				
U	M	Lat	Long		1	2	3	4	
1	0				25	50	50	40	41,25
	10				50	55	55	50	52,5
	20				80	90	70	70	77,5
	30				70	50	45	40	51,25
	40				60	65	50	50	56,25
	50				50	25	60	40	43,75
	60				80	70	50	50	62,5
	70				60	80	70	50	65
	80				50	70	50	20	47,5
	90				0	0	0	0	0
	100				0	0	0	0	0
2	0				80	45	20	70	53,75
	10				0	0	0	0	0
	20				85	70	60	80	73,75
	30				80	100	55	100	83,75
	40				95	70	70	90	81,25
	50				75	70	80	65	72,5
	60				80	40	45	40	51,25
	70				35	20	30	40	31,25
	80				60	45	45	80	57,5
	90				80	60	75	60	68,75
	100				15	20	25	15	18,75
3	0				0	35	10	10	13,75
	10				0	45	15	20	20
	20				50	40	30	30	37,5
	30				30	40	10	30	27,5
	40				20	40	50	40	37,5
	50				25	35	60	20	35
	60				30	10	40	50	32,5
	70				80	40	40	30	47,5
	80				80	20	40	50	47,5
	90				50	25	30	50	38,75
	100				10	10	20	10	12,5
Total									
Rata-rata									43,64
									45,227273
									53,863636
									31,818182

Lampiran 12. Nilai Penuutupan Lamun Perjenis (Stasiun 2)

Nilai Penutupan Lamun per jenis																													
CR					TH					EH					HO					Sr					H				
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
5	40	10	10	16,25	0	0	0	0	0	20	10	40	30	25	0				0	0				0	0				0
0	0	0	0	0	40	50	40	50	45	10	5	15	0	7,5	0				0	0				0	0				0
0	0	0	0	0	40	70	50	60	55	40	20	20	10	22,5	0				0	0				0	0				0
0	0	5	20	6,25	30	40	30	10	27,5	40	10	10	10	17,5	3	5	5	5	4,5	0				0	0				0
40	50	20	10	30	20	15	20	25	20	0	0	10	15	6,25	5	3	3	3	3,5	0				0	0				0
0	0	0	0	0	20	15	20	0	13,75	30	10	40	40	30	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	80	70	50	50	62,5	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	60	80	70	50	65	0				0	0				0	0				0
0	0	0	0	0	30	20	0	0	12,5	20	50	50	20	35	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	20	15	5	40	20	60	30	15	30	33,75	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
5	5	0	0	2,5	80	65	60	80	71,25	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	40	50	35	80	51,25	40	50	20	20	32,5	0				0	0				0	0				0
0	0	0	0	0	15	30	20	40	26,25	80	40	50	50	55	0				0	0				0	0				0
0	0	0	0	0	60	50	60	30	50	15	20	20	35	22,5	0				0	0				0	0				0
0	0	0	0	0	40	40	45	40	41,25	40	0	0	0	10	5	5	5	5	5	0				0	0				0
0	0	0	0	0	35	20	30	40	31,25	0	0	0	0	0	5	0	5	5	3,75	0				0	0				0
0	0	0	0	0	40	45	45	80	52,5	20	0	0	0	5	5	5	5	5	5	0				0	0				0
0	0	0	0	0	80	60	75	60	68,75	0	0	0	0	0	0				0	15	10	15	15	13,75	0				0
0	0	0	0	0	15	20	25	15	18,75	0	0	0	0	0	0				0	80	75	60	60	68,75	0				0
0	0	0	0	0	0	0	0	0	0	0	35	10	10	13,75	0				0	0				0	0				0
0	40	5	0	11,25	0	0	0	0	0	0	5	10	20	8,75	0				0	0				0	0				0
50	40	30	30	37,5	0	0	0	0	0	0	0	0	0	0	5	5	10	10	7,5	0				0	0				0
30	40	10	30	27,5	0	0	0	0	0	0	0	0	0	0	0				0	0				0	10	10	10	20	12,5
20	40	50	40	37,5	0	0	0	0	0	0	0	0	0	0	0				0	0				0	40	10	20	20	22,5
20	25	20	20	21,25	0	0	0	0	0	5	10	40	0	13,75	5	0	0	5	2,5	0				0	0				0
30	10	40	50	32,5	0	0	0	0	0	0	0	0	0	0	0				0	0				0	10	60	30	20	30
0	0	20	20	10	0	0	0	0	0	80	40	20	10	37,5	0				0	0				0	10	20	30	10	17,5
80	20	40	50	47,5	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0	0	0	0	0
10	5	10	10	8,75	40	20	20	40	30	0	0	0	0	0	0				0	0				0	70	50	60	50	57,5
0	0	0	0	0	10	10	20	10	12,5	0	0	0	0	0	0				0	0				0	0				0
				8,75					19,62					15,27					0,96					2,50					4,24

Lampiran 13. Tegakan Lamun Perjenis (Stasiun 2)

Tegakan lamun per jenis																													
CR					TH					EH					HO					Sr					H					
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
8	46	15	14	20,75	0	0	0	0	0	7	4	15	10	9	0				0	0				0	0				0
0	0	0	0	0	18	24	19	26	21,75	4	2	5	0	2,75	0				0	0				0	0				0
0	0	0	0	0	27	36	24	32	29,75	16	4	3	4	6,75	0				0	0				0	0				0
0	0	8	25	8,25	16	23	18	7	16	15	4	4	5	7	19	35	37	38	32,25	0				0	0				0
47	57	25	14	35,75	11	8	12	13	11	0	0	3	5	2	39	18	17	20	23,5	0				0	0				0
0	0	0	0	0	13	8	12	0	8,25	10	3	15	14	10,5	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	28	24	19	18	22,25	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	20	27	24	17	22	0				0	0				0	0				0
0	0	0	0	0	16	12	0	0	7	7	17	16	7	11,75	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	12	8	2	20	10,5	20	11	6	12	12,25	0				0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	46	35	32	43	39	0	0	0	0	0	0				0	0				0	0				0
0	0	0	0	0	20	26	17	43	26,5	15	16	8	7	11,5	0				0	0				0	0				0
0	0	0	0	0	8	16	11	19	13,5	28	15	17	16	19	0				0	0				0	0				0
0	0	0	0	0	300	26	30	14	92,5	5	7	7	12	7,75	0				0	0				0	0				0
0	0	0	0	0	18	19	24	20	20,25	16	0	0	0	4	34	36	32	35	34,25	0				0	0				0
0	0	0	0	0	17	10	14	23	16	0	0	0	0	0	38	0	37	36	27,75	0				0	0				0
0	0	0	0	0	20	22	23	45	27,5	7	0	0	0	1,75	37	36	38	36	36,75	0				0	0				0
0	0	0	0	0	40	32	38	32	35,5	0	0	0	8	2	0				0	60	40	65	64	57,25	0				0
0	0	0	0	0	7	10	13	7	9,25	0	0	0	0	0	0				0	325	307	245	240	279,25	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
0	49	9	0	14,5	0	0	0	0	0	0	0	0	0	0	0				0	0				0	0				0
58	47	34	35	43,5	0	0	0	0	0	5	5	0	3	3,25	36	34	67	64	50,25	0				0	0				0
34	47	13	36	32,5	0	0	0	0	0	8	6	0	5	4,75	0				0	0				0	40	45	43	79	51,75
27	43	54	46	42,5	0	0	0	0	0	8	5	5	3	5,25	0				0	0				0	156	44	82	78	90
26	30	21	24	25,25	0	0	0	0	0	3	0	6	0	2,25	37	0	0	34	17,75	0				0	0				0
34	13	46	58	37,75	0	0	0	0	0	0	0	0	0	0	0				0	0				0	40	240	123	84	121,75
0	0	23	24	11,75	0	0	0	0	0	3	0	2	0	1,25	0				0	0				0	46	87	123	43	74,75
90	24	43	56	53,25	0	0	0	0	0	0	10	0	6	4	0				0	0				0	0				0
13	9	11	40	18,25	20	12	12	22	16,5	0	0	0	0	0	0				0	0				0	287	206	248	208	237,25
0	0	0	0	0	4	5	10	6	6,25	0	3	0	5	2	0				0	0				0	0				0
			1376					1628					700					890					1346					2302	
				10,424242					12,333333					5,3030303					6,7424242					10,19697					17,439394

Lampiran 14. Data Lamun Stasiun 2

JENIS LAMUN	JUMLAH PENUTUPAN	PENUTUPAN JENIS	PENUTUPAN RELATIF
Cymodocea rotundata	0	8,75	17,04
Thalassia hemprichii	0	19,62	38,22
Enhalus acoroides	0	15,27	29,73
Halopihla ovalis	0	0,96	1,87
Syringodium isoetifolium	0	2,50	4,87
Haladule pinifolia	0	4,24	8,26
Total	0	51,34	100,00

JENIS LAMUN	PENUTUPAN JENIS
Cymodocea rotundata	8,75
Thalassia hemprichii	19,62
Enhalus acoroides	15,27
Halopihla ovalis	0,96
Syringodium isoetifolium	2,50
Haladule pinifolia	4,24

JENIS LAMUN	JUMLAH TEGAKAN	KERAPATAN JENIS	KERAPATAN RELATIF
Cymodocea rotundata	1376	16,6788	16,6950
Thalassia hemprichii	1628	19,7333	19,7525
Enhalus acoroides	700	8,4848	8,4931
Halopihla ovalis	890	10,7879	10,7983
Syringodium isoetifolium	1346	16,3152	16,3310
Haladule pinifolia	2302	27,9030	27,9301
Total	**8242**	**99,9030**	**100,0000**
	82,5		

JENIS LAMUN	KERAPATAN JENIS
Cymodocea rotundata	16,68
Thalassia hemprichii	19,73
Enhalus acoroides	8,48
Halopihla ovalis	10,79
Syringodium isoetifolium	16,32
Haladule pinifolia	27,90

JENIS LAMUN	PLOT YANG DIJUMPAI	FREKUENSI JENIS	FREKUENSI RELATIF
Cymodocea rotundata	93	1,6316	34,31734317
Thalassia hemprichii	121	2,1228	44,64944649
Enhalus acoroides	57	1	21,03321033
Total		**4,7544**	**100**

JENIS LAMUN	Transek 1	Transek 2	Transek 3
Cymodocea rotundata	✓	✓	✓
Thalassia hemprichii	✓	✓	✓
Enhalus acoroides	✓	✓	✓
Halopihla ovalis	✓	✓	✓
Syringodium isoetifolium	x	✓	x
Haladule pinifolia	x	x	✓

JENIS LAMUN	FREKUENSI JENIS
Cymodocea rotundata	1,6316
Thalassia hemprichii	2,1228
Enhalus acoroides	1

Lampiran 15. Komposisi Persen Tutupan Lamun (Stasiun 3)

Transek		Kordinat		Substrat	Nilai Penutupan lamun (%)				TOTAL
					Kotak				
U	M	Lat	Long		1	2	3	4	
1	0				40	50	30	20	35
	10				20	40	20	30	27,5
	20				40	30	50	40	40
	30				60	40	40	63	50,75
	40				70	70	40	60	60
	50				50	60	60	60	57,5
	60				40	20	60	20	35
	70				40	60	40	50	47,5
	80				60	50	40	30	45
	90				50	40	60	50	50
	100				50	30	40	40	40
2	0				70	50	85	55	65
	10				25	50	40	45	40
	20				100	85	85	80	87,5
	30				80	75	70	75	75
	40				75	70	75	85	76,25
	50				85	60	85	85	78,75
	60				85	95	80	90	87,5
	70				35	60	20	40	38,75
	80				60	50	25	65	50
	90				10	35	40	45	32,5
	100				30	0	25	30	21,25
3	0				60	40	40	50	47,5
	10				80	90	70	60	75
	20				45	45	55	75	55
	30				65	110	50	65	72,5
	40				45	50	20	20	33,75
	50				70	80	90	80	80
	60				60	60	60	70	62,5
	70				40	60	50	50	50
	80				10	10	10	20	12,5
	90				20	40	60	70	47,5
	100				40	40	70	60	52,5
Total									
Rata-rata									52,41
									44,386364
									59,318182
									53,522727

Lampiran 16. Nilai Penutupan Lamun Perjenis (Stasiun 3)

Nilai Penutupan Lamun per jenis																									
CR					TH					EH					HO					H					
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
40	50	30	20	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	10	20	11,25
20	40	20	30	27,5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	2,5	20	5	10	10	11,25
40	30	50	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5
0	20	10	40	17,5	20	10	20	20	17,5	40	10	10	3	15,75	0	0	0	5	1,25	0				0
20	10	40	40	27,5	40	40	0	20	25	10	20	0	0	7,5	0	0	0	0	0	0				0
0	0	0	0	0	30	20	40	50	35	20	40	20	10	22,5	0				0	0				0
0	0	0	0	0	0	0	0	0	0	40	20	60	20	35	0				0	0				0
0	0	0	0	0	40	50	20	40	37,5	0	10	20	10	10	0				0	0				0
0	0	0	0	0	20	20	0	0	10	40	30	40	30	35	0				0	0				0
0	0	0	0	0	50	40	60	50	50	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	40	0	10	50	30	0	40	30	0				0	0				0
20	15	5	15	13,75	20	35	55	5	28,75	30	0	25	35	22,5	0				0	0				0
5	10	5	5	6,25	20	40	35	40	33,75	0	0	0	0	0	0				0	0				0
5	5	5	10	6,25	75	80	80	70	76,25	20	0	0	0	5	0				0	0				0
0	0	0	0	0	50	45	45	75	53,75	30	30	25	0	21,25	5	0	5	5	3,75	0				0
0	0	0	0	0	50	40	75	70	58,75	25	30	0	15	17,5	0				0	0				0
0	0	0	0	0	50	45	50	55	50	35	15	35	30	28,75	0				0	0				0
0	0	0	0	0	5	5	5	5	5	80	90	75	85	82,5	0				0	0				0
0	0	0	0	0	0	0	0	0	0	35	60	20	40	38,75	0				0	0				0
0	0	0	0	0	40	20	5	50	28,75	20	30	20	15	21,25	0				0	0				0
0	0	0	0	0	10	0	0	0	2,5	0	35	40	45	30	0				0	0				0
0	0	0	0	0	0	0	0	0	0	30	0	25	30	21,25	0				0	0				0
60	40	30	40	42,5	0	0	10	10	5	0	0	0	0	0	0				0	5	10	10	10	8,75
80	80	60	60	70	0	0	0	0	0	0	10	10	0	5	0				0	0				0
40	20	50	70	45	5	15	0	0	5	0	10	5	5	5	0				0	0				0
50	60	40	60	52,5	5	0	0	0	1,25	10	50	10	5	18,75	0				0	0				0
0	0	0	0	0	5	0	0	0	1,25	40	50	20	20	32,5	0				0	0				0
0	0	0	0	0	60	80	90	80	77,5	10	0	0	0	2,5	0				0	0				0
0	0	0	0	0	40	60	60	60	55	20	0	0	10	7,5	0				0	0				0
0	0	0	0	0	0	0	0	0	0	40	60	50	50	50	0				0	0				0
0	0	0	0	0	0	0	0	0	0	10	10	10	20	12,5	0				0	0				0
0	0	0	0	0	20	40	60	70	47,5	0	0	0	0	0	0				0	0				0
0	0	0	0	0	40	20	70	60	47,5	0	20	0	0	5	0				0	0				0
																				0				
				11,63					23,11					17,67					0,23					1,10

Lampiran 17. Tegakan Lamun Perjenis (Stasiun 3)

Tegakan lamun per jenis																							
CR					TH					EH					HO					H				
1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL	1	2	3	4	TOTAL
45	53	35	26	39,75	0	0	0	0	0	0	0	0	0	0	0				0	40	24	43	82	47,25
24	42	24	35	31,25	0	0	0	0	0	4	2	10	10	6,5	0		35	35	23,33	87	23	42	45	49,25
47	34	52	44	44,25	0	0	0	0	0	0	0	3	4	1,75	0				0	24	21	24	23	23
0	26	15	45	21,5	12	6	12	13	10,75	0	10	0	9	4,75	0			36	18	0				0
25	14	47	46	33	20	19	0	11	12,5	0	0	0	0	0	0				0	0				0
0	0	0	0	0	15	10	20	24	17,25	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0
0	0	0	0	0	20	25	10	21	19	0	0	0	0	0	0				0	0				0
0	0	0	0	0	12	10	0	0	5,5	0	0	0	0	0	0				0	0				0
0	0	0	0	0	26	20	32	25	25,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	25	0	6,25	0	0	0	0	0	0				0	0				0
25	20	12	21	19,5	12	17	27	3	14,75	0	0	0	0	0	0				0	0				0
9	13	8	10	10	10	20	17	21	17	0	0	0	0	0	0				0	0				0
8	8	8	16	10	38	42	43	36	39,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	26	22	23	37	27	0	0	0	0	0	37	0	32	36	26,25	0				0
0	0	0	0	0	26	21	36	34	29,25	0	0	0	0	0	0				0	0				0
0	0	0	0	0	26	22	26	26	25	0	0	0	0	0	0				0	0				0
0	0	0	0	0	3	3	2	3	2,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0
0	0	0	0	0	21	11	3	24	14,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	6	0	0	0	1,5	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0
63	45	32	43	45,75	0	0	5	4	2,25	0	0	0	0	0	0				0	24	42	46	43	38,75
85	86	65	63	74,75	0	0	0	0	0	0	0	0	0	0	0				0	0				0
43	24	52	74	48,25	3	7	0	0	2,5	0	0	0	0	0	0				0	0				0
57	62	43	63	56,25	3	0	0	0	0,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	3	0	0	0	0,75	0	0	0	0	0	0				0	0				0
0	0	0	0	0	31	42	47	41	40,25	3	0	0	0	0,75	0				0	0				0
0	0	0	0	0	39	30	32	32	33,25	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0				0
0	0	0	0	0	10	20	32	35	24,25	0	0	0	0	0	0				0	0				0
0	0	0	0	0	22	10	36	30	24,5	0	0	0	0	0	0				0	0				0
			1737					1589					55					211					633	
				13,159091					12,037879					0,4166667					2,0479798					4,7954545

Lampiran 18. Data Lamun Stasiun 3

JENIS LAMUN	JUMLAH PENUTUPAN	PENUTUPAN JENIS	PENUTUPAN RELATIF
Cymodocea rotundata	0	11,63	21,64
Thalassia hemprichii	0	23,11	43,00
Enhalus acoroides	0	17,67	32,89
Halopihla ovalis	0	0,23	0,42
Haladule pinifolia	0	1,10	2,04
Total	0	53,73	100,00

JENIS LAMUN	PENUTUPAN JENIS
Cymodocea rotundata	11,63
Thalassia hemprichii	23,11
Enhalus acoroides	17,67
Halopihla ovalis	0,23
Haladule pinifolia	1,10

JENIS LAMUN	JUMLAH TEGAKAN	KERAPATAN JENIS	KERAPATAN RELATIF
Cymodocea rotundata	1737	21,05	41,11
Thalassia hemprichii	1589	19,26	37,61
Enhalus acoroides	55	0,67	1,30
Halopihla ovalis	211	2,56	4,99
Haladule pinifolia	633	7,67	14,98
Total	4225	51,21	100,00
	82,5		

JENIS LAMUN	KERAPATAN JENIS
Cymodocea rotundata	21,05
Thalassia hemprichii	19,26
Enhalus acoroides	0,67
Halopihla ovalis	2,56
Haladule pinifolia	7,67

JENIS LAMUN	PLOT YANG DIJUMPAI	FREKUENSI JENIS	FREKUENSI RELATIF
Cymodocea rotundata			
Thalassia hemprichii			
Enhalus acoroides			
Halopihla ovalis			
Haladule pinifolia			
Total			

Lampiran 19. Data Rata-Rata Arah dan Kecepatan Arus Dari BMKG

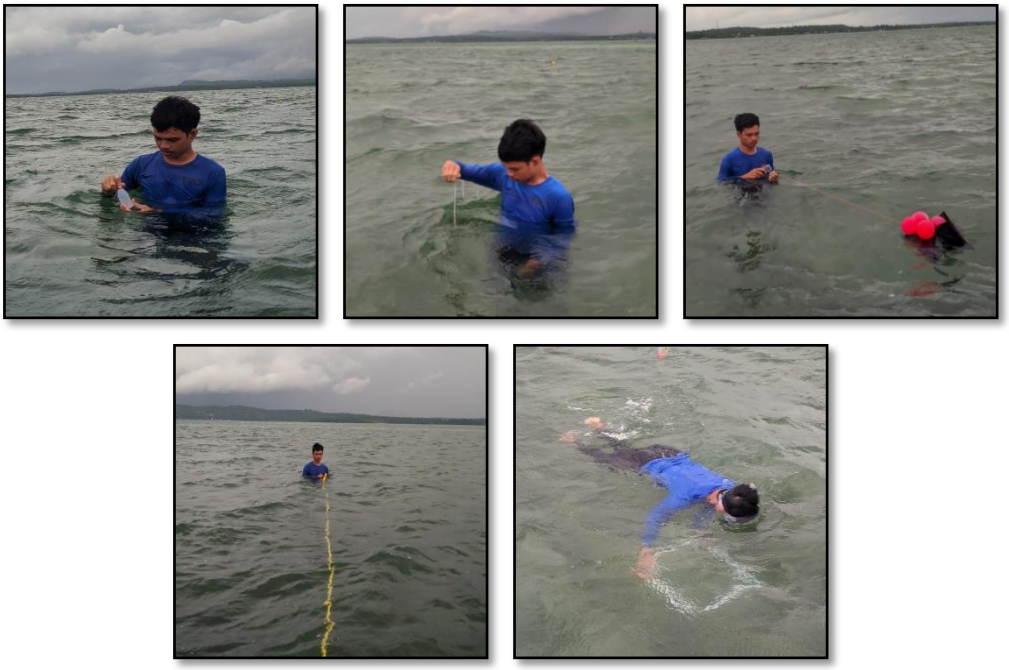
BMKG

BADAN METEOROLOGI, KLIMATOLOGI, DAN GEOFISIKA
STASIUN METEOROLOGI MARITIM PAOTERE MAKASSAR
Jln. Sabutung 1 No. 30 Makassar 90163
Telp : (0411) 3619242 Fax : (0411) 3628235
Email : stamar.paotere@bmkg.go.id, meteo_marptr@yahoo.co.id

RATA - RATA DATA ARAH DAN KECEPATAN ARUS
PULAU LIBUKANG, KAB. JENEPONTO
TAHUN 2022

TAHUN	BULAN	PARAMETER	
		Arah Arus	Kecepatan (cm/s)
2022	JANUARI	Timur Laut - Tenggara	30 - 60
	FEBRUARI	Timur Laut - Tenggara	20 - 45
	MARET	Timur Laut - Tenggara	5 - 20
	APRIL	Barat Laut - Timur Laut	5 - 20
	MEI	Barat Laut - Timur Laut	5 - 20
	JUNI	Barat Daya - Barat Laut	10 - 30
	JULI	Barat Daya - Barat Laut	20 - 45
	AGUSTUS	Barat Daya - Barat Laut	10 - 30
	SEPTEMBER	Barat Daya - Barat Laut	10 - 30
	OKTOBER	Barat Laut - Timur Laut	10 - 30
	NOVEMBER	Timur Laut - Tenggara	20 - 45
	DESEMBER	Timur Laut - Tenggara	20 - 45

Lampiran 20. Dokumentasi Pengambilan Data di Lapangan



Lampiran 21. Dokumentasi Analisis Sampel di Laboratorium