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LAMPIRAN

Lampiran 1. Hasil Analisis Konsentrasi Nitrat di sedimen

| KONSENTRASI NITROGEN | | |
|-----------------------------|-----------|----------------|
| Stasiun | | N (ppm) |
| Dermaga | S1.1 | 0.99 |
| | S1.2 | 1.63 |
| | S1.3 | 1 |
| | Rata-rata | 1.21 |
| Tambak | S2.1 | 0.30 |
| | S2.2 | 4.39 |
| | S2.3 | 0.31 |
| | Rata-rata | 1.67 |
| Muara | S3.1 | 1.02 |
| | S3.2 | 1.44 |
| | S3.3 | 0.85 |
| | Rata-rata | 1.10 |

Lampiran 2. Hasil Analisis Konsentrasi Fosfat di sedimen

| KONSENTRASI PHOSFOR | | |
|----------------------------|-----------|---------------|
| Stasiun | | P(ppm) |
| Dermaga | S1.1 | 0.33 |
| | S1.2 | 0.45 |
| | S1.3 | 0.82 |
| | Rata-rata | 0.53 |
| Tambak | S2.1 | 1.46 |
| | S2.2 | 1.15 |
| | S2.3 | 1.03 |
| | Rata-rata | 1.21 |
| Muara | S3.1 | 1.58 |
| | S3.2 | 0.86 |
| | S3.3 | 1.57 |
| | Rata-rata | 1.34 |

Lampiran 3. Hasil Uji Statistik One Way ANOVA Bahan Organik antar stasiun

Descriptives

BOT

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|---|---------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | Dermaga | 3 | | |
| Tambak | 3 | 18.3033 | 1.97285 | 1.13902 | 13.4025 | 23.2042 | 16.71 | 20.51 |
| Muara | 3 | 21.7300 | .78632 | .45398 | 19.7767 | 23.6833 | 20.86 | 22.39 |
| Total | 9 | 18.8922 | 2.51450 | .83817 | 16.9594 | 20.8250 | 16.13 | 22.39 |

Test of Homogeneity of Variances

BOT

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 2.835 | 2 | 6 | .136 |

ANOVA

BOT

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 40.372 | 2 | 20.186 | 11.863 | .008 |
| Within Groups | 10.210 | 6 | 1.702 | | |
| Total | 50.582 | 8 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: BOT

Tukey HSD

| (I) Stasiun | (J) Stasiun | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-------------|-------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Dermaga | Tambak | -1.66000 | 1.06510 | .332 | -4.9280 | 1.6080 |
| | Muara | -5.08667* | 1.06510 | .007 | -8.3547 | -1.8186 |
| Tambak | Dermaga | 1.66000 | 1.06510 | .332 | -1.6080 | 4.9280 |
| | Muara | -3.42667* | 1.06510 | .042 | -6.6947 | -.1586 |
| Muara | Dermaga | 5.08667* | 1.06510 | .007 | 1.8186 | 8.3547 |
| | Tambak | 3.42667* | 1.06510 | .042 | .1586 | 6.6947 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

BOT

Tukey HSD^a

| Stasiun | N | Subset for alpha = 0.05 | |
|---------|---|-------------------------|---------|
| | | 1 | 2 |
| Dermaga | 3 | 16.6433 | |
| Tambak | 3 | 18.3033 | |
| Muara | 3 | | 21.7300 |
| Sig. | | .332 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 4. Hasil Uji Statistik One Way ANOVA Nitrat antar stasiun

Descriptives

Nitrat

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|---|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | Dermaga | 3 | | |
| Tambak | 3 | 1.6667 | 2.35848 | 1.36167 | -4.1921 | 7.5255 | .30 | 4.39 |
| Muara | 3 | 1.1033 | .30370 | .17534 | .3489 | 1.8578 | .85 | 1.44 |
| Total | 9 | 1.3256 | 1.23074 | .41025 | .3795 | 2.2716 | .30 | 4.39 |

Test of Homogeneity of Variances

Nitrat

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 11.281 | 2 | 6 | .009 |

ANOVA

Nitrat

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .540 | 2 | .270 | .140 | .872 |
| Within Groups | 11.578 | 6 | 1.930 | | |
| Total | 12.118 | 8 | | | |

Lampiran 5. Hasil Uji Statistik One Way ANOVA Fosfat antar stasiun

Descriptives

Fosfat

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|---|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| | | | | | Dermaga | 3 | | |
| Tambak | 3 | 1.2133 | .22189 | .12811 | .6621 | 1.7645 | 1.03 | 1.46 |
| Muara | 3 | 1.3367 | .41284 | .23835 | .3111 | 2.3622 | .86 | 1.58 |
| Total | 9 | 1.0278 | .45999 | .15333 | .6742 | 1.3814 | .33 | 1.58 |

Test of Homogeneity of Variances

Fosfat

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.586 | 2 | 6 | .280 |

ANOVA

Fosfat

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 1.123 | 2 | .561 | 5.912 | .038 |
| Within Groups | .570 | 6 | .095 | | |
| Total | 1.693 | 8 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Fosfat

Tukey HSD

| (I) Stasiun | (J) Stasiun | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-------------|-------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Dermaga | Tambak | -.68000 | .25162 | .079 | -1.4520 | .0920 |
| | Muara | -.80333* | .25162 | .043 | -1.5754 | -.0313 |
| Tambak | Dermaga | .68000 | .25162 | .079 | -.0920 | 1.4520 |
| | Muara | -.12333 | .25162 | .879 | -.8954 | .6487 |
| Muara | Dermaga | .80333* | .25162 | .043 | .0313 | 1.5754 |
| | Tambak | .12333 | .25162 | .879 | -.6487 | .8954 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Fosfat

Tukey HSD^a

| Stasiun | N | Subset for alpha = 0.05 | |
|---------|---|-------------------------|--------|
| | | 1 | 2 |
| Dermaga | 3 | .5333 | |
| Tambak | 3 | 1.2133 | 1.2133 |
| Muara | 3 | | 1.3367 |
| Sig. | | .079 | .879 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 6. Korelasi Bahan organik total, Nitrat, Fosfat, Eh dengan Mangrove.

Descriptive Statistics

| | Mean | Std. Deviation | N |
|----------|-----------|----------------|----|
| Nitrat | 1.3256 | 1.23074 | 9 |
| Fosfat | 1.0278 | .45999 | 9 |
| Bot | 18.9422 | 2.45972 | 9 |
| Eh | -17.0167 | 6.31623 | 9 |
| Mangrove | 2191.6667 | 650.11654 | 12 |

Correlations

| | | Nitrat | Fosfat | Bot | Eh | Mangrove |
|----------|---------------------|--------|--------|---------|---------|----------|
| Nitrat | Pearson Correlation | 1 | -.086 | -.332 | -.019 | .170 |
| | Sig. (2-tailed) | | .825 | .383 | .962 | .662 |
| | N | 9 | 9 | 9 | 9 | 9 |
| Fosfat | Pearson Correlation | -.086 | 1 | .534 | -.549 | -.060 |
| | Sig. (2-tailed) | .825 | | .138 | .125 | .878 |
| | N | 9 | 9 | 9 | 9 | 9 |
| Bot | Pearson Correlation | -.332 | .534 | 1 | -.824** | -.287 |
| | Sig. (2-tailed) | .383 | .138 | | .006 | .454 |
| | N | 9 | 9 | 9 | 9 | 9 |
| Eh | Pearson Correlation | -.019 | -.549 | -.824** | 1 | .255 |
| | Sig. (2-tailed) | .962 | .125 | .006 | | .507 |
| | N | 9 | 9 | 9 | 9 | 9 |
| Mangrove | Pearson Correlation | .170 | -.060 | -.287 | .255 | 1 |
| | Sig. (2-tailed) | .662 | .878 | .454 | .507 | |
| | N | 9 | 9 | 9 | 9 | 12 |

** . Correlation is significant at the 0.01 level (2-tailed).

Lampiran 7. Data Hasil Analisis BOT

| No. | Berat cawan kosong | B.Sampel | B.ck + B.sp (B.awal) | Berat Setelah Pijar (B.akhir) | B.aw - B.ak (Konsentrasi Bahan Organik) | Berat BO/B.sampel | % | LOI |
|-----|--------------------|----------|----------------------|-------------------------------|---|-------------------|-----|-------|
| 1.1 | 26.527 | 5.048 | 31.575 | 30.761 | 0.814 | 0.161251981 | 100 | 16.13 |
| | 27.014 | 5.043 | 32.057 | 31.214 | 0.843 | 0.167162403 | 100 | 16.72 |
| | 30.808 | 5.083 | 35.891 | 35.000 | 0.891 | 0.175290183 | 100 | 17.53 |
| 2.1 | 27.212 | 5.075 | 32.287 | 31.389 | 0.898 | 0.176945813 | 100 | 17.69 |
| | 27.769 | 5.004 | 32.773 | 31.937 | 0.836 | 0.167066347 | 100 | 16.71 |
| | 28.092 | 5.002 | 33.094 | 32.068 | 1.026 | 0.205117953 | 100 | 20.51 |
| 3.1 | 25.762 | 5.028 | 30.790 | 29.741 | 1.049 | 0.208631663 | 100 | 20.86 |
| | 24.270 | 5.038 | 29.308 | 28.180 | 1.128 | 0.223898372 | 100 | 22.39 |
| | 28.346 | 5.036 | 33.382 | 32.277 | 1.105 | 0.219420175 | 100 | 21.94 |

Lampiran 8. Ukuran Butir Sedimen

| Stasiun | Ulangan | Berat Awal (gr) | Berat Hasil Ayakan (gr) | | | | | | | Berat akhir |
|---------|---------|-----------------|-------------------------|--------|--------------------|---------|-------------------|----------|-----------|-------------|
| | | | 2 mm | 1 mm | 0,5 mm | 0,25 mm | 0,125 mm | 0,063 mm | <0,063 mm | |
| I | 1 | 100.038 | 1.133 | 9.43 | 19.251 | 19.279 | 30.014 | 20.595 | 0.316 | 100.018 |
| | | | 10.563 | | 38.53 | | 50.925 | | | |
| | 2 | 100.026 | 3.932 | 11.261 | 18.430 | 18.077 | 26.748 | 21.558 | 0.011 | 100.017 |
| | | | pasir kasar (15%) | | pasir sedang (36%) | | pasir halus (48%) | | | |
| | 3 | 100.039 | 4.955 | 11.345 | 10.075 | 26.950 | 39.362 | 7.321 | 0.030 | 100.038 |
| | | | pasir kasar (16%) | | pasir sedang (37%) | | pasir halus (46%) | | | |
| II | 1 | 100.056 | 5.460 | 7.538 | 13.479 | 15.134 | 38.208 | 20.164 | 0.070 | 100.053 |
| | | | pasir kasar (13%) | | pasir sedang (28%) | | pasir halus (58%) | | | |
| | 2 | 100.018 | 3.950 | 7.943 | 18.114 | 22.968 | 35.232 | 11.777 | 0.026 | 100.010 |
| | | | pasir kasar (11%) | | pasir sedang (41%) | | pasir halus (47%) | | | |
| | 3 | 100.005 | 6.418 | 8.849 | 19.106 | 17.445 | 26.311 | 21.854 | 0.018 | 100.001 |
| | | | pasir kasar (15%) | | pasir sedang (36%) | | pasir halus (48%) | | | |
| III | 1 | 100.002 | 2.026 | 9.028 | 17.002 | 18.244 | 32.815 | 20.858 | 0.037 | 100.01 |
| | | | pasir kasar (11%) | | pasir sedang (35%) | | pasir halus (53%) | | | |
| | 2 | 100.028 | 3.772 | 10.163 | 17.890 | 14.385 | 32.016 | 21.782 | 0.009 | 100.017 |
| | | | pasir kasar (13%) | | pasir sedang (32%) | | pasir halus (53%) | | | |
| | 3 | 100.025 | 2.082 | 9.513 | 10.299 | 12.216 | 38.277 | 27.604 | 0.011 | 100.002 |
| | | | pasir kasar (11%) | | pasir sedang (22%) | | pasir halus (65%) | | | |

Lampiran 9. Kerapatan Mangrove.

| Jumlah Pohon | rata-rata | Jenis | Jumlah Propagul | |
|--------------|-------------------------|-----------------------------|-------------------------|---|
| 20 | 22.0 | <i>Avicennia Alba</i> | 4 | |
| 33 | | <i>Avicennia Alba</i> | 7 | |
| 13 | | <i>Avicennia Alba</i> | 9 | |
| 16 | 26.3 | <i>Avicennia Marina</i> | 10 | |
| 9 | | <i>Avicennia Alba</i> | | |
| 3 | | <i>Rhizophora Mucronata</i> | 7 | |
| 10 | | <i>Avicennia Marina</i> | | |
| 13 | | <i>Avicennia Alba</i> | | |
| 1 | | <i>Rhizophora Mucronata</i> | 8 | |
| 12 | | <i>Avicennia Marina</i> | | |
| 15 | | <i>Avicennia Alba</i> | | |
| 22 | | 19.7 | <i>Avicennia Marina</i> | 4 |
| 5 | | | <i>Avicennia Alba</i> | |
| 17 | <i>Avicennia Marina</i> | | 1 | |
| 10 | <i>Avicennia Marina</i> | | 5 | |
| 5 | <i>Avicennia Alba</i> | | | |

| $D_i = \text{Kerapatan} = n_i / A$ | | | $R_{di} = \text{ker relatif} = n_i / \sum n_i * 100\%$ | |
|------------------------------------|---|------|--|------|
| S1 | 1 | 2000 | 2200 | 100% |
| | 2 | 3300 | | 100% |
| | 3 | 1300 | | 100% |
| S2 | 1 | 2500 | 2633 | 64% |
| | | 36% | | |
| | 2 | 2600 | | 12% |
| | | 38% | | |
| | 3 | 2800 | | 50% |
| | | | | 4% |
| S3 | 1 | 2700 | 1967 | 81% |
| | | | | 19% |
| | 2 | 1700 | | 100% |
| | | | | 67% |
| | 3 | 1500 | | 33% |

Lampiran 10. GRADISTAT jenis sedimen.

St.1.1

| SAMPLE STATISTICS | | | | | | |
|--|-------------------|---------------|--|---------------------|-------------|---------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| MODE 1: | 152.5 | 2.737 | GRAVEL: 1.1% | COARSE SAND: 19.2% | | |
| MODE 2: | 76.50 | 3.731 | SAND: 98.6% | MEDIUM SAND: 19.3% | | |
| MODE 3: | 302.5 | 1.747 | MUD: 0.3% | FINE SAND: 30.0% | | |
| D ₁₀ : | 74.51 | -0.029 | | V FINE SAND: 20.6% | | |
| MEDIAN or D ₅₀ : | 178.0 | 2.490 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.1% | | |
| D ₉₀ : | 1020.2 | 3.747 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.1% | | |
| (D ₉₀ / D ₁₀): | 13.69 | ##### | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.1% | | |
| (D ₉₀ - D ₁₀): | 945.7 | 3.775 | FINE GRAVEL: 0.0% | FINE SILT: 0.1% | | |
| (D ₇₅ / D ₂₅): | 4.154 | 3.352 | V FINE GRAVEL: 1.1% | V FINE SILT: 0.1% | | |
| (D ₇₅ - D ₂₅): | 414.4 | 2.055 | V COARSE SAND: 9.4% | CLAY: 0.1% | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic | Geometric | Logarithmic | Geometric | Logarithmic | Description |
| | μm | μm | ϕ | μm | ϕ | |
| MEAN (\bar{x}): | 376.7 | 240.6 | 2.055 | 211.5 | 2.241 | Fine Sand |
| SORTING (σ): | 394.2 | 2.511 | 1.328 | 2.584 | 1.370 | Poorly Sorted |
| SKEWNESS (S_k): | 2.279 | 0.232 | -0.232 | 0.294 | -0.294 | Coarse Skewed |
| KURTOSIS (K): | 9.781 | 2.605 | 2.605 | 0.829 | 0.829 | Platykurtic |

setelah dibagi 1000
0.2115

St.1.2

| SAMPLE STATISTICS | | | | | | |
|--|-------------------|---------------|--|---------------------|-------------|---------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| MODE 1: | 152.5 | 2.737 | GRAVEL: 3.9% | COARSE SAND: 18.4% | | |
| MODE 2: | 76.50 | 3.731 | SAND: 96.1% | MEDIUM SAND: 18.1% | | |
| MODE 3: | 605.0 | 0.747 | MUD: 0.0% | FINE SAND: 26.7% | | |
| D ₁₀ : | 74.32 | -0.224 | | V FINE SAND: 21.6% | | |
| MEDIAN or D ₅₀ : | 258.3 | 1.953 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| D ₉₀ : | 1167.8 | 3.750 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| (D ₉₀ / D ₁₀): | 15.71 | -16.758 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| (D ₉₀ - D ₁₀): | 1093.5 | 3.974 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D ₇₅ / D ₂₅): | 4.497 | 3.841 | V FINE GRAVEL: 3.9% | V FINE SILT: 0.0% | | |
| (D ₇₅ - D ₂₅): | 458.1 | 2.169 | V COARSE SAND: 11.3% | CLAY: 0.0% | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic | Geometric | Logarithmic | Geometric | Logarithmic | Description |
| | μm | μm | ϕ | μm | ϕ | |
| MEAN (\bar{x}): | 452.9 | 265.3 | 1.914 | 245.7 | 2.025 | Fine Sand |
| SORTING (σ): | 524.3 | 2.709 | 1.438 | 2.686 | 1.425 | Poorly Sorted |
| SKEWNESS (S_k): | 2.209 | 0.405 | -0.405 | 0.020 | -0.020 | Symmetrical |
| KURTOSIS (K): | 8.028 | 2.160 | 2.160 | 0.814 | 0.814 | Platykurtic |

setelah dibagi 1000
0.2457

St.1.3

SAMPLE STATISTICS

SAMPLE IDENTITY: **SEDIMEN** ANALYST & DATE: BESAR BUTIR,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Slightly Gravelly Sand
 SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand

| | μm ϕ | | GRAIN SIZE DISTRIBUTION | | | | | | | | | | |
|---------------------------------------|----------------------|---------|-------------------------|-------|------|-------------|-------------|-----------|-------------|-----------------|---------------|---------------|------|
| | μm | ϕ | GRAVEL | SAND | MUD | COARSE SAND | MEDIUM SAND | FINE SAND | V FINE SAND | V COARSE GRAVEL | V COARSE SILT | V COARSE SAND | CLAY |
| MODE 1: | 152.5 | 2.737 | 5.0% | 95.0% | 0.0% | 10.1% | 26.9% | 39.3% | 7.3% | 0.0% | 0.0% | 11.3% | 0.0% |
| MODE 2: | 302.5 | 1.747 | | | | | | | | | | | |
| MODE 3: | 1200.0 | -0.243 | | | | | | | | | | | |
| D ₁₀ : | 128.1 | -0.269 | | | | | | | | | | | |
| MEDIAN or D ₅₀ : | 261.0 | 1.938 | | | | | | | | | | | |
| D ₉₀ : | 1205.3 | 2.965 | | | | | | | | | | | |
| (D ₉₀ / D ₁₀): | 9.408 | -11.004 | | | | | | | | | | | |
| (D ₉₀ - D ₁₀): | 1077.2 | 3.234 | | | | | | | | | | | |
| (D ₇₅ / D ₂₅): | 3.562 | 2.967 | | | | | | | | | | | |
| (D ₇₅ - D ₂₅): | 377.1 | 1.833 | | | | | | | | | | | |

| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | Description |
|-----------------------|--------------------------|-------------------------|--------------------|-------------------------|--------------------|---------------|
| | Arithmetic μm | Geometric μm | Logarithmic ϕ | Geometric μm | Logarithmic ϕ | |
| MEAN (\bar{x}): | 463.0 | 285.4 | 1.809 | 329.1 | 1.603 | Medium Sand |
| SORTING (σ): | 552.6 | 2.450 | 1.293 | 2.547 | 1.349 | Poorly Sorted |
| SKEWNESS (S_k): | 2.303 | 0.755 | -0.755 | 0.261 | -0.261 | Coarse Skewed |
| KURTOSIS (K): | 7.897 | 2.845 | 2.845 | 0.922 | 0.922 | Mesokurtic |

setelah dibagi 1000

0.3291

St. 2.1

SAMPLE STATISTICS

SAMPLE IDENTITY: **SEDIMEN** ANALYST & DATE: BESAR BUTIR,
 SAMPLE TYPE: Polymodal, Poorly Sorted TEXTURAL GROUP: Gravelly Sand
 SEDIMENT NAME: Very Fine Gravelly Fine Sand

| | μm ϕ | | GRAIN SIZE DISTRIBUTION | | | | | | | | | | |
|---------------------------------------|----------------------|---------|-------------------------|-------|------|-------------|-------------|-----------|-------------|-----------------|---------------|---------------|------|
| | μm | ϕ | GRAVEL | SAND | MUD | COARSE SAND | MEDIUM SAND | FINE SAND | V FINE SAND | V COARSE GRAVEL | V COARSE SILT | V COARSE SAND | CLAY |
| MODE 1: | 152.5 | 2.737 | 5.5% | 94.5% | 0.1% | 13.5% | 15.1% | 38.2% | 20.2% | 0.0% | 0.0% | 7.5% | 0.0% |
| MODE 2: | 76.50 | 3.731 | | | | | | | | | | | |
| MODE 3: | 302.5 | 1.747 | | | | | | | | | | | |
| D ₁₀ : | 75.10 | -0.193 | | | | | | | | | | | |
| MEDIAN or D ₅₀ : | 166.1 | 2.590 | | | | | | | | | | | |
| D ₉₀ : | 1142.9 | 3.735 | | | | | | | | | | | |
| (D ₉₀ / D ₁₀): | 15.22 | -19.380 | | | | | | | | | | | |
| (D ₉₀ - D ₁₀): | 1067.8 | 3.928 | | | | | | | | | | | |
| (D ₇₅ / D ₂₅): | 3.970 | 3.105 | | | | | | | | | | | |
| (D ₇₅ - D ₂₅): | 388.6 | 1.989 | | | | | | | | | | | |

| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | Description |
|-----------------------|--------------------------|-------------------------|--------------------|-------------------------|--------------------|--------------------|
| | Arithmetic μm | Geometric μm | Logarithmic ϕ | Geometric μm | Logarithmic ϕ | |
| MEAN (\bar{x}): | 422.3 | 236.4 | 2.081 | 208.8 | 2.260 | Fine Sand |
| SORTING (σ): | 563.6 | 2.663 | 1.413 | 2.802 | 1.487 | Poorly Sorted |
| SKEWNESS (S_k): | 2.470 | 0.772 | -0.772 | 0.407 | -0.407 | Very Coarse Skewed |
| KURTOSIS (K): | 8.596 | 2.825 | 2.825 | 1.010 | 1.010 | Mesokurtic |

setelah dibagi 1000

0.2088

St. 2.2

| SAMPLE STATISTICS | | | | | | |
|--|-----------------------------|----------------------------|--|----------------------------|-----------------------|---------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| | | | GRAVEL: 3.9% | COARSE SAND: 18.1% | | |
| MODE 1: | 152.5 | 2.737 | SAND: 96.0% | MEDIUM SAND: 23.0% | | |
| MODE 2: | 302.5 | 1.747 | MUD: 0.0% | FINE SAND: 35.2% | | |
| MODE 3: | 605.0 | 0.747 | | V FINE SAND: 11.8% | | |
| D ₁₀ : | 85.22 | -0.116 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| MEDIAN or D ₅₀ : | 261.6 | 1.935 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| D ₉₀ : | 1083.4 | 3.553 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| (D ₉₀ / D ₁₀): | 12.71 | -30.725 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D ₉₀ - D ₁₀): | 998.2 | 3.668 | V FINE GRAVEL: 3.9% | V FINE SILT: 0.0% | | |
| (D ₇₅ / D ₂₅): | 3.844 | 3.258 | V COARSE SAND: 7.9% | CLAY: 0.0% | | |
| (D ₇₅ - D ₂₅): | 407.6 | 1.943 | | | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic μm | Geometric μm | Logarithmic ϕ | Geometric μm | Logarithmic ϕ | Description |
| MEAN (\bar{x}): | 431.9 | 272.9 | 1.874 | 281.9 | 1.827 | Medium Sand |
| SORTING (σ): | 501.5 | 2.435 | 1.284 | 2.325 | 1.217 | Poorly Sorted |
| SKEWNESS (S_k): | 2.573 | 0.563 | -0.563 | 0.131 | -0.131 | Coarse Skewed |
| KURTOSIS (K): | 9.871 | 2.718 | 2.718 | 0.884 | 0.884 | Platykurtic |

setelah dibagi 1000
0.2819

St. 2.3

| SAMPLE STATISTICS | | | | | | |
|---|-----------------------------|----------------------------|-------------------------------|----------------------------|-----------------------|---------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Gravelly Sand | | | |
| SEDIMENT NAME: Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| | | | GRAVEL: 6.4% | COARSE SAND: 19.1% | | |
| MODE 1: | 142.5 | 2.822 | SAND: 93.6% | MEDIUM SAND: 17.4% | | |
| MODE 2: | 76.50 | 3.731 | MUD: 0.0% | FINE SAND: 26.3% | | |
| MODE 3: | 605.0 | 0.747 | | V FINE SAND: 21.9% | | |
| D ₁₀ : | 74.15 | -0.289 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| MEDIAN or D ₅₀ : | 259.3 | 1.947 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| D ₉₀ : | 1221.7 | 3.753 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| (D ₉₀ / D ₁₀): | 16.48 | -12.991 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D ₉₀ - D ₁₀): | 1147.6 | 4.042 | V FINE GRAVEL: 6.4% | V FINE SILT: 0.0% | | |
| (D ₇₅ / D ₂₅): | 4.613 | 3.934 | V COARSE SAND: 8.8% | CLAY: 0.0% | | |
| (D ₇₅ - D ₂₅): | 465.1 | 2.206 | | | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic μm | Geometric μm | Logarithmic ϕ | Geometric μm | Logarithmic ϕ | Description |
| MEAN (\bar{x}): | 482.8 | 266.9 | 1.905 | 245.8 | 2.024 | Fine Sand |
| SORTING (σ): | 597.1 | 2.835 | 1.503 | 2.886 | 1.529 | Poorly Sorted |
| SKEWNESS (S_k): | 2.157 | 0.477 | -0.477 | 0.076 | -0.076 | Symmetrical |
| KURTOSIS (K): | 7.082 | 2.207 | 2.207 | 0.925 | 0.925 | Mesokurtic |

setelah dibagi 1000
0.2458

St. 3.1

| SAMPLE STATISTICS | | | | | | |
|--|-------------------|---------------|--|---------------------|-------------|--------------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| MODE 1: | 152.5 | 2.737 | GRAVEL: 2.0% | COARSE SAND: 17.0% | | |
| MODE 2: | 76.50 | 3.731 | SAND: 97.9% | MEDIUM SAND: 18.2% | | |
| MODE 3: | 302.5 | 1.747 | MUD: 0.0% | FINE SAND: 32.8% | | |
| D_{10} : | 74.70 | -0.057 | | V FINE SAND: 20.9% | | |
| MEDIAN or D_{50} : | 172.7 | 2.533 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| D_{90} : | 1040.0 | 3.743 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| (D_{90} / D_{10}) : | 13.92 | -66.103 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| $(D_{90} - D_{10})$: | 965.3 | 3.799 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D_{75} / D_{25}) : | 4.070 | 3.227 | V FINE GRAVEL: 2.0% | V FINE SILT: 0.0% | | |
| $(D_{75} - D_{25})$: | 401.7 | 2.025 | V COARSE SAND: 9.0% | CLAY: 0.0% | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic | Geometric | Logarithmic | Geometric | Logarithmic | Description |
| | μm | μm | ϕ | μm | ϕ | |
| MEAN (\bar{x}): | 381.0 | 236.9 | 2.077 | 209.3 | 2.256 | Fine Sand |
| SORTING (σ): | 435.1 | 2.503 | 1.324 | 2.591 | 1.373 | Poorly Sorted |
| SKEWNESS (S_k): | 2.530 | 0.515 | -0.515 | 0.323 | -0.323 | Very Coarse Skewed |
| KURTOSIS (K): | 10.62 | 2.427 | 2.427 | 0.848 | 0.848 | Platykurtic |

setelah dibagi 1000
0.2093

St. 3.2

| SAMPLE STATISTICS | | | | | | |
|--|-------------------|---------------|--|---------------------|-------------|--------------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| MODE 1: | 152.5 | 2.737 | GRAVEL: 3.8% | COARSE SAND: 17.9% | | |
| MODE 2: | 76.50 | 3.731 | SAND: 96.2% | MEDIUM SAND: 14.4% | | |
| MODE 3: | 605.0 | 0.747 | MUD: 0.0% | FINE SAND: 32.0% | | |
| D_{10} : | 74.20 | -0.188 | | V FINE SAND: 21.8% | | |
| MEDIAN or D_{50} : | 172.4 | 2.536 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| D_{90} : | 1139.1 | 3.752 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| (D_{90} / D_{10}) : | 15.35 | -19.974 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| $(D_{90} - D_{10})$: | 1064.9 | 3.940 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D_{75} / D_{25}) : | 4.408 | 3.651 | V FINE GRAVEL: 3.8% | V FINE SILT: 0.0% | | |
| $(D_{75} - D_{25})$: | 441.9 | 2.140 | 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}): | 429.7 | 249.5 | 2.003 | 212.7 | 2.233 | Fine Sand |
| SORTING (σ): | 516.0 | 2.682 | 1.424 | 2.668 | 1.416 | Poorly Sorted |
| SKEWNESS (S_k): | 2.323 | 0.532 | -0.532 | 0.338 | -0.338 | Very Coarse Skewed |
| KURTOSIS (K): | 8.597 | 2.266 | 2.266 | 0.823 | 0.823 | Platykurtic |

setelah dibagi 1000
0.2127

St. 3.3

| SAMPLE STATISTICS | | | | | | |
|--|-------------------|---------------|--|---------------------|-------------|--------------------|
| SAMPLE IDENTITY: SEDIMEN | | | ANALYST & DATE: BESAR BUTIR, | | | |
| SAMPLE TYPE: Polymodal, Poorly Sorted | | | TEXTURAL GROUP: Slightly Gravelly Sand | | | |
| SEDIMENT NAME: Slightly Very Fine Gravelly Fine Sand | | | | | | |
| | μm | ϕ | GRAIN SIZE DISTRIBUTION | | | |
| MODE 1: | 152.5 | 2.737 | GRAVEL: 2.1% | COARSE SAND: 10.3% | | |
| MODE 2: | 76.50 | 3.731 | SAND: 97.9% | MEDIUM SAND: 12.2% | | |
| MODE 3: | 302.5 | 1.747 | MUD: 0.0% | FINE SAND: 38.3% | | |
| D ₁₀ : | 71.68 | -0.081 | | V FINE SAND: 27.6% | | |
| MEDIAN or D ₅₀ : | 154.7 | 2.692 | V COARSE GRAVEL: 0.0% | V COARSE SILT: 0.0% | | |
| D ₉₀ : | 1058.0 | 3.802 | COARSE GRAVEL: 0.0% | COARSE SILT: 0.0% | | |
| (D ₉₀ / D ₁₀): | 14.76 | -46.723 | MEDIUM GRAVEL: 0.0% | MEDIUM SILT: 0.0% | | |
| (D ₉₀ - D ₁₀): | 986.3 | 3.884 | FINE GRAVEL: 0.0% | FINE SILT: 0.0% | | |
| (D ₇₅ / D ₂₅): | 3.732 | 2.171 | V FINE GRAVEL: 2.1% | V FINE SILT: 0.0% | | |
| (D ₇₅ - D ₂₅): | 237.7 | 1.900 | V COARSE SAND: 9.5% | CLAY: 0.0% | | |
| | METHOD OF MOMENTS | | | FOLK & WARD METHOD | | |
| | Arithmetic | Geometric | Logarithmic | Geometric | Logarithmic | Description |
| | μm | μm | ϕ | μm | ϕ | |
| MEAN (\bar{x}): | 342.9 | 200.3 | 2.320 | 194.2 | 2.364 | Fine Sand |
| SORTING (σ): | 445.8 | 2.536 | 1.343 | 2.614 | 1.386 | Poorly Sorted |
| SKEWNESS (S_k): | 2.654 | 0.888 | -0.888 | 0.381 | -0.381 | Very Coarse Skewed |
| KURTOSIS (K): | 10.80 | 2.849 | 2.849 | 0.913 | 0.913 | Mesokurtic |

setelah dibagi 1000
0.1942

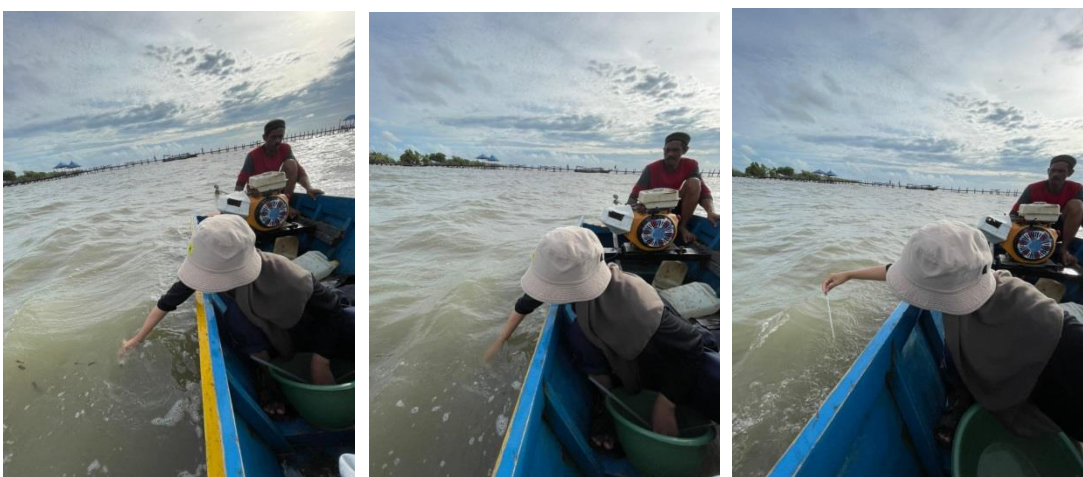
Lampiran 11. Pengambilan Data di Lapangan



Gambar 9. Pengambilan Data Kerapatan Mangrove



Gambar 10. Pengambilan Sampel sedimen untuk BOT, Nitrat, Fosfat dan Eh



Gambar 11. Pengambilan Data Suhu dan Pengambilan sampel air untuk pH

Lampiran 12. Pengamatan Samel di Laboratorium



Gambar 12. Pengukuran Salinitas Air



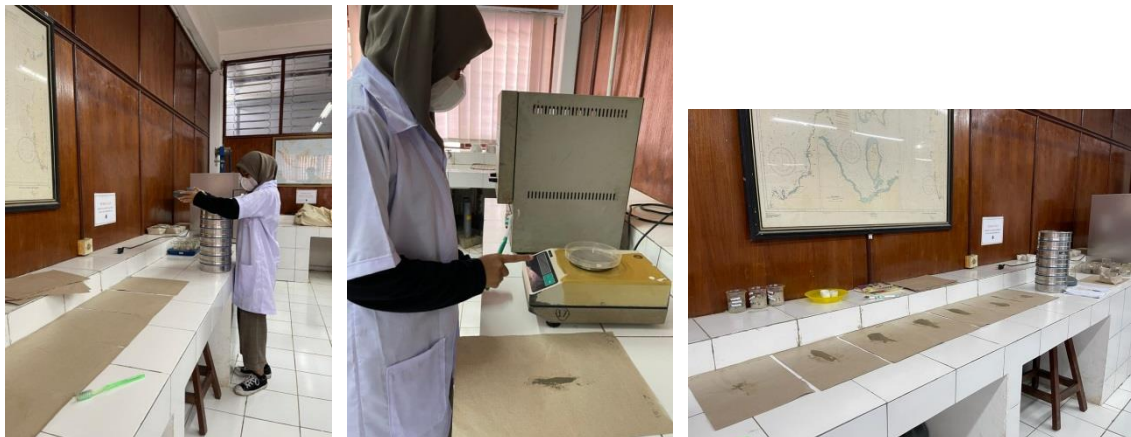
Gambar 13. Pengukuran pH air



Gambar 14. Pengeringan Sampel Sedimen



Gambar 15. Analisis Bahan Organik Total



Gambar 16. Analisis Ukuran Butir Sedimen



**Harus semangat walaupun tidak ada yang bilang “cumungud ya cayanggg”
Tetaplah santuy Jalani aja terus nanti juga nyampe dan tau tau sidang.**