

Lampiran 1. Hasil Analisis Data Laju Eksploitasi Penangkapan Ikan

No.	Jenis Ikan	Sampel (ekor)	Panjang (cm)			Persamaan Walford	Lj. Mortalitas	Lj. Mortalitas	Lj. Mortalitas	Laju
			Minimal	Maksimal	Rataan	$Ln+1 = a + b.Ln$	Alami	Penangkapan	Total	Eksploitasi
1	Teri, <i>Stolephorus</i> sp	4.836	1,8	14,9	6,5323	$\hat{Y} = 1,08695 + 0,99749.X$	0,01754	0,20897	0,22651	0,92258
2	Tongkol, <i>Euthynnus</i> sp	2.228	8,9	39,2	21,03362	$\hat{Y} = 2,56101 + 0,99781.X$	0,01214	0,19536	0,20750	0,94148
3	Kembung, <i>Rastrelliger</i> spp	3.051	3,5	21,5	12,76437	$\hat{Y} = 1,38901 + 0,99947.X$	0,00385	0,14539	0,14924	0,97421
4	Sarden, <i>Sardinella</i> spp	3.560	4,2	20,2	11,12255	$\hat{Y} = 1,32397 + 0,99400.X$	0,03744	0,14473	0,18217	0,79448
5	Selar, <i>Selaroides</i> sp	1.808	3,1	18,0	11,03475	$\hat{Y} = 1,29156 + 0,99504.X$	0,03157	0,12469	0,15626	0,79798
6	Peperek, <i>Leiognathus</i> spp	865	1,5	13,8	6,3857	$\hat{Y} = 1,19985 + 0,99227.X$	0,04882	0,18757	0,23639	0,79348
7	Talang-Talang, <i>Scomberoides</i> sp	329	3,6	42,5	15,41064	$\hat{Y} = 3,82483 + 1,02626.X$	0,10934	0,17651	0,28585	0,61748
8	Kuwe, <i>Caranx</i> sp	196	5,6	47,0	13,14745	$\hat{Y} = 4,40678 + 1,00798.X$	0,03480	0,53291	0,56771	0,93870
9	Gole-Gole, <i>Alectis</i> sp	448	6,3	48,4	17,6980	$\hat{Y} = -1,04718 + 1,00836.X$	0,15707	0,19474	0,37670	0,51698
10	Barakuda, <i>Sphyraena</i> sp	210	8,8	47,8	20,16143	$\hat{Y} = 3,34819 + 1,00676.X$	0,03219	0,24957	0,28175	0,88577
11	Layang, <i>Decapterus</i> sp	119	5,0	18,2	10,8950	$\hat{Y} = 0,78309 + 1,01108.X$	0,07644	0,03531	0,11175	0,31600
12	Tenggiri, <i>Acanthocybium</i> sp	375	9,3	65,5	24,14853	$\hat{Y} = 4,84666 + 1,02039.X$	0,08100	0,20929	0,29029	0,72096
13	Kakap, <i>Lutjanus</i> sp	1.502	4,4	47,6	16,35067	$\hat{Y} = 4,03752 + 0,98864.X$	0,04990	0,27425	0,32415	0,84607
14	Kerong-Kerong, <i>Therapon</i> spp	40	9,7	23,6	16,2000	$\hat{Y} = 3,25572 + 0,94707.X$	0,22585	0,15324	0,37909	0,40423
15	Layur, <i>Trihiurusavala</i> sp	40	20,4	43,6	31,2875	$\hat{Y} = 4,19783 + 0,99630.X$	0,01729	0,35833	0,37562	0,95397
16	Tuna, <i>Thunnus</i> sp	40	12,3	21,7	17,3800	$\hat{Y} = 2,27510 + 0,95790.X$	0,20084	0,10957	0,31041	0,35298
17	Cakalang, <i>Katsuwonus</i> sp	54	21,7	43,2	31,08519	$\hat{Y} = 2,79701 + 1,01462.X$	0,06936	0,17842	0,24778	0,72009
18	Kerapu, <i>Epinephelus</i> spp	60	11,9	48,7	25,70833	$\hat{Y} = 5,04005 + 1,01436.X$	0,05786	0,27801	0,33586	0,82774
19	Manyung, <i>Arius</i> spp	39	18,8	53,8	32,62051	$\hat{Y} = 3,71402 + 1,00667.X$	0,03090	0,22124	0,25214	0,87746
20	Cumi-Cumi, <i>Loligo</i> spp	130	3,2	15,1	8,6623	$\hat{Y} = 1,48468 + 0,99765.X$	0,01513	0,25326	0,26839	0,94362

Lampiran 2. Perhitungan Laju Mortalitas Alami

Laju mortalitas alami (M) diduga dengan menggunakan rumus empiris

Pauly 1984 dalam Sparred and Venema (1998), yaitu :

$$\ln M = -0,0152 - 0,2790 * \ln L_{\infty} + 0,6543 * \ln K + 0,4630 * \ln T$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log L_{\infty}) - \log(-t_0)}{0,6543}$$

$$L_{\infty} = \frac{a}{1 - b}$$

$$a = \frac{\sum y_i - b \sum x_i}{n}$$

$$b = \frac{n \cdot \sum x_i y_i - \sum x_i \cdot \sum y_i}{n \cdot \sum x_i^2 - (\sum x_i)^2}$$

1. Ikan Teri (*Stolephorus sp*)

$$\ln M = -0,0152 - 0,2790 * \ln 432,82466 + 0,6543 * \ln 0,00251 + 0,4630 * \ln 30,45520$$

$$\ln M = -4,04354$$

$$M = 0,01754$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 432,82466) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00251$$

$$L_{\infty} = \frac{1,08696}{1 - 0,99749}$$

$$L_{\infty} = 432,82466$$

$$a = \frac{97,76730 - 0,99749 * 86,02680}{11}$$

$$a = 1,08696$$

$$b = \frac{11 * 899,21154 - 86,02680 * 97,76730}{11 * 807,73247 - 7400,61032}$$

$$b = 0,99749$$

2. Ikan Tongkol (*Euthynnus sp*)

$$\ln M = -0,0152 - 0,2790 * \ln 1169,93000 + 0,6543 * \ln 0,00219 + 0,4630 * \ln 30,45520$$

$$\ln M = -4,41094$$

$$M = 0,01214$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 1169,93000) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00219$$

$$L_{\infty} = \frac{2,56100}{1 - 0,99781}$$

$$L_{\infty} = 1169,93000$$

$$a = \frac{282,93140 - 0,99781 * 255,31920}{11}$$

$$a = 2,56100$$

$$b = \frac{11 * 7290,20510 - 255,31920 * 282,93140}{11 * 6650,88927 - 65187,89389}$$

$$b = 0,99781$$

3. Ikan Kembung (*Rastrelliger spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 2607,97406 + 0,6543 * \ln 0,00053 + 0,4630 * \ln 30,45520$$

$$\ln M = -5,55995$$

$$M = 0,00385$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 2607,97406) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00053$$

$$L_{\infty} = \frac{1,38901}{1 - 0,99947}$$

$$L_{\infty} = 2607,97406$$

$$a = \frac{158,81180 - 0,99947 * 142,21940}{12}$$

$$a = 1,38901$$

$$b = \frac{12 * 2152,40260 - 142,21940 * 158,81180}{12 * 1955,89984 - 20226,35774}$$

$$b = 0,99947$$

4. Ikan Sarden (*Sardinella spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 220,77692 + 0,6543 * \ln 0,00602 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,28505$$

$$M = 0,03744$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 220,77692) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00602$$

$$L_{\infty} = \frac{1,32397}{1 - 0,99400}$$

$$L_{\infty} = 220,77692$$

$$a = \frac{158,27430 - 0,99400 * 143,24570}{12}$$

$$a = 1,32397$$

$$b = \frac{12 * 2113,71907 - 143,24570 * 158,27430}{12 * 1935,67421 - 20519,33057}$$

$$b = 0,99400$$

5. Ikan Selar (*Selaroides* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 260,38802 + 0,6543 * \ln 0,00497 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,45562$$

$$M = 0,03157$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 260,38802) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00497$$

$$L_{\infty} = \frac{1,29156}{1 - 0,99504}$$

$$L_{\infty} = 260,38802$$

$$a = \frac{125,97750 - 0,99504 * 112,32750}{11}$$

$$a = 1,29156$$

$$b = \frac{11 * 2464,77701 - 112,32750 * 125,97750}{11 * 1326,27783 - 12617,46726}$$

$$b = 0,99504$$

6. Ikan Peperek (*Leiognathus* spp)

$$\ln M = -0,0152 - 0,2790 * \ln 155,14343 + 0,6543 * \ln 0,00776 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,01962$$

$$M = 0,04882$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 155,14343) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00776$$

$$L_{\infty} = \frac{1,19985}{1 - 0,99227}$$

$$L_{\infty} = 155,14343$$

$$a = \frac{85,79630 - 0,99227 * 74,37300}{10}$$

$$a = 1,19985$$

$$b = \frac{10 * 749,94264 - 74,37300 * 85,79630}{10 * 665,85590 - 5531,34313}$$

$$b = 0,99227$$

7. Ikan Talang – Talang (*Scomeroide* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 145,66316 + 0,6543 * \ln 0,02592 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,21326$$

$$M = 0,10934$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 145,66316) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,02592$$

$$L_{\infty} = \frac{3,82483}{1 - 1,02626}$$

$$L_{\infty} = 145,66316$$

$$a = \frac{205,30610 - 1,02626 * 170,23740}{8}$$

$$a = 3,82483$$

$$b = \frac{8 * 5185,33890 - 170,23740 * 205,30610}{8 * 4418,19746 - 28980,77236}$$

$$b = 1,02626$$

8. Ikan Kuwe (*Caranx* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 551,97511 + 0,6543 * \ln 0,00795 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,35805$$

$$M = 0,03480$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 551,97511) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00795$$

$$L_{\infty} = \frac{4,40678}{1 - 1,00798}$$

$$L_{\infty} = 551,97511$$

$$a = \frac{231,20300 - 1,00798 * 194,39680}{8}$$

$$a = 4,40678$$

$$b = \frac{8 * 6571,85155 - 194,39680 * 231,20300}{8 * 5669,92182 - 37790,11585}$$

$$b = 1,00798$$

9. Ikan Gole – Gole (*Alectis sp*)

$$\ln M = -0,0152 - 0,2790 * \ln 3,06972 + 0,6543 * \ln 0,29351 + 0,4630 * \ln 30,45520$$

$$\ln M = 0,45154$$

$$M = 1,57073$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 3,06972) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,29351$$

$$L_{\infty} = \frac{-1,04718}{1 - 1,34113}$$

$$L_{\infty} = 3,06972$$

$$a = \frac{147,72890 - 1,34113 * 114,83720}{6}$$

$$a = -1,04718$$

$$b = \frac{6 * 3190,16688 - 114,83720 * 147,72890}{6 * 2468,37690 - 13187,58250}$$

$$b = 1,34113$$

10. Ikan Barakuda (*Sphyræna* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 495,28147 + 0,6543 * \ln 0,00637 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,43625$$

$$M = 0,03219$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 495,28147) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00637$$

$$L_{\infty} = \frac{3,34819}{1 - 1,00676}$$

$$L_{\infty} = 495,28147$$

$$a = \frac{207,59510 - 1,00676 * 172,49670}{7}$$

$$a = 3,34819$$

$$b = \frac{7 * 5837,18253 - 172,49670 * 207,59510}{7 * 4926,58525 - 29755,11151}$$

$$b = 1,00676$$

11. Ikan Layang (*Decapterus* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 70,68752 + 0,6543 * \ln 0,01102 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,57130$$

$$M = 0,07644$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 70,68752) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,01102$$

$$L_{\infty} = \frac{0,78309}{1 - 1,01108}$$

$$L_{\infty} = 70,68752$$

$$a = \frac{72,98380 - 1,01108 * 61,12820}{6}$$

$$a = 0,78309$$

$$b = \frac{6 * 804,99415 - 61,12820 * 72,98380}{6 * 677,77008 - 3736,65684}$$

$$b = 1,01108$$

12. Ikan Tenggir (*Acanthocybium* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 237,64398 + 0,6543 * \ln 0,02019 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,51329$$

$$M = 0,08100$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 237,64398) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,02019$$

$$L_{\infty} = \frac{4,84666}{1 - 1,02040}$$

$$L_{\infty} = 237,64398$$

$$a = \frac{366,14330 - 1,02040 * 316,07710}{9}$$

$$a = 4,84666$$

$$b = \frac{9 * 14852,65963 - 316,07710 * 366,14330}{9 * 13054,50026 - 99904,73314}$$

$$b = 1,02040$$

13. Kakap (*Lutjanus sp*)

$$\ln M = -0,0152 - 0,2790 * \ln 355,30288 + 0,6543 * \ln 0,01143 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,99782$$

$$M = 0,04990$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 355,30288) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,01143$$

$$L_{\infty} = \frac{4,03752}{1 - 0,98864}$$

$$L_{\infty} = 355,30288$$

$$a = \frac{312,17410 - 0,98864 * 270,83910}{11}$$

$$a = 4,03752$$

$$b = \frac{11 * 9181,67946 - 270,83910 * 312,17410}{11 * 8181,12856 - 73353,81809}$$

$$b = 0,98864$$

14. Kerong – Kerong (*Therapon spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 61,51132 + 0,6543 * \ln 0,05438 + 0,4630 * \ln 30,45520$$

$$\ln M = -1,48789$$

$$M = 0,22585$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 61,51132) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,05438$$

$$L_{\infty} = \frac{3,25572}{1 - 0,94707}$$

$$L_{\infty} = 61,51132$$

$$a = \frac{90,86830 - 0,94707 * 78,75830}{5}$$

$$a = 3,25572$$

$$b = \frac{5 * 1490,71329 - 78,75830 * 90,86830}{5 * 1303,27962 - 6202,86982}$$

$$b = 0,94707$$

15. Layur (*Trihiurusavala* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 1133,65894 + 0,6543 * \ln 0,00371 + 0,4630 * \ln 30,45520$$

$$\ln M = -4,05771$$

$$M = 0,01729$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 1133,65894) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00371$$

$$L_{\infty} = \frac{4,19783}{1 - 0,99630}$$

$$L_{\infty} = 1133,65894$$

$$a = \frac{128,80590 - 0,99630 * 112,43090}{4}$$

$$a = 4,19783$$

$$b = \frac{4 * 3705,88964 - 112,43090 * 128,80590}{4 * 3245,94322 - 12640,70727}$$

$$b = 0,99630$$

16. Tuna (*Thunnus* sp)

$$\ln M = -0,0152 - 0,2790 * \ln 54,04268 + 0,6543 * \ln 0,04301 + 0,4630 * \ln 30,45520$$

$$\ln M = -1,60526$$

$$M = 0,20084$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 54,04268) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,04301$$

$$L_{\infty} = \frac{2,27510}{1 - 0,95790}$$

$$L_{\infty} = 54,04268$$

$$a = \frac{89,44640 - 0,95790 * 81,50200}{5}$$

$$a = 2,27510$$

$$b = \frac{5 * 1485,33708 - 81,50200 * 89,44640}{5 * 1357,04106 - 6642,57600}$$

$$b = 0,95790$$

17. Cakalang (*Katsuwonus sp*)

$$\ln M = -0,0152 - 0,2790 * \ln 191,26846 + 0,6543 * \ln 0,01452 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,66851$$

$$M = 0,06936$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 191,26846) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,01452$$

$$L_{\infty} = \frac{2,79701}{1 - 1,01462}$$

$$L_{\infty} = 191,26846$$

$$a = \frac{203,81620 - 1,01462 * 184,33850}{6}$$

$$a = 2,79701$$

$$b = \frac{6 * 6434,52190 - 184,33850 * 203,81620}{6 * 5833,61841 - 33980,68258}$$

$$b = 1,01462$$

18. Kerapu (*Epinephelus spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 351,02355 + 0,6543 * \ln 0,01426 + 0,4630 * \ln 30,45520$$

$$\ln M = -2,84980$$

$$M = 0,05786$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 351,02355) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,01426$$

$$L_{\infty} = \frac{5,04005}{1 - 1,01436}$$

$$L_{\infty} = 351,02355$$

$$a = \frac{197,44860 - 1,01436 * 164,84150}{6}$$

$$a = 5,04005$$

$$b = \frac{6 * 5946,52833 - 164,84150 * 197,44860}{6 * 5043,30690 - 27172,72012}$$

$$b = 1,01436$$

19. Manyung (*Arius spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 556,44959 + 0,6543 * \ln 0,00665 + 0,4630 * \ln 30,45520$$

$$\ln M = -3,47706$$

$$M = 0,03090$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 556,44959) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00665$$

$$L_{\infty} = \frac{3,71402}{1 - 1,00667}$$

$$L_{\infty} = 556,44959$$

$$a = \frac{195,38650 - 1,00667 * 165,75320}{5}$$

$$a = 3,71402$$

$$b = \frac{5 * 6810 - 165,75320 * 195,38650}{5 * 5807,01498 - 27474,12331}$$

$$b = 1,00667$$

20. Cumi – Cumi (*Lolligo spp*)

$$\ln M = -0,0152 - 0,2790 * \ln 630,75250 + 0,6543 * \ln 0,00236 + 0,4630 * \ln 30,45520$$

$$\ln M = -4,19103$$

$$M = 0,01513$$

$$\text{Log } K = \frac{0,3922 - 0,2752 (\log 630,75250) - \log(-30,45520)}{0,6543}$$

$$\text{Log } K = 0,00236$$

$$L_{\infty} = \frac{1,48468}{1 - 0,99765}$$

$$L_{\infty} = 630,75250$$

$$a = \frac{69,87300 - 0,99765 * 59,62060}{7}$$

$$a = 1,48468$$

$$b = \frac{7 * 569,06228 - 59,62060 * 69,87300}{7 * 569,06228 - 3554,61594}$$

$$b = 0,99765$$

Lampiran 3. Perhitungan Laju Mortalitas Total

Mortalitas total akan diduga dengan persamaan yang dikemukakan oleh

Beverton dan Holt, (1957) dalam Sparre *et al.*, (1999) yaitu :

$$Z = K \left[\frac{L_{\infty} - \bar{L}}{\bar{L} - L'} \right]$$

1. Teri (*Stolephorus sp*)

$$Z = 0,00251 \left[\frac{432,82466 - 6,53235}{6,53235 - 1,8} \right]$$

$$Z = 0,22651$$

2. Tongkol (*Euthinnus sp*)

$$Z = 0,00219 \left[\frac{1169,93193 - 21,03361}{21,03361 - 8,9} \right]$$

$$Z = 0,20750$$

3. Ikan Kembung (*Rastrelliger spp*)

$$Z = 0,00053 \left[\frac{2607,97406 - 12,76437}{12,76437 - 3,5} \right]$$

$$Z = 0,14924$$

4. Ikan Sarden (*Sardinella spp*)

$$Z = 0,00602 \left[\frac{220,77692 - 11,12254}{11,12254 - 4,2} \right]$$

$$Z = 0,18217$$

5. Ikan Selar (*Selaroides sp*)

$$Z = 0,00497 \left[\frac{260,38802 - 11,03475}{11,03475 - 3,1} \right]$$

$$Z = 0,15626$$

6. Ikan Peperek (*Leiognathus spp*)

$$Z = 0,00776 \left[\frac{155,14343 - 6,38566}{6,38566 - 1,5} \right]$$

$$Z = 0,23639$$

7. Ikan Talang – Talang (*Scomberiodes sp*)

$$Z = 0,02592 \left[\frac{145,66316 - 15,41063}{15,41063 - 3,6} \right]$$

$$Z = 0,28585$$

8. Ikan Kuwe (*Caranx sp*)

$$Z = 0,00795 \left[\frac{551,97511 - 13,14743}{13,14743 - 5,6} \right]$$

$$Z = 0,56771$$

9. Ikan Gole – Gole (*Alectis sp*)

$$Z = 0,029351 \left[\frac{3,06972 - 17,69798}{17,69798 - 6,3} \right]$$

$$Z = 0,37670$$

10. Ikan Barakuda (*Sphyaena sp*)

$$Z = 0,00674 \left[\frac{495,28147 - 20,16144}{20,16144 - 8,8} \right]$$

$$Z = 0,28175$$

11. Ikan Layang (*Decapterus* sp)

$$Z = 0,01102 \left[\frac{70,68752 - 10,89494}{10,89494 - 5,0} \right]$$

$$Z = 0,11175$$

12. Ikan Tenggir (*Acanthocybium* sp)

$$Z = 0,02019 \left[\frac{237,64398 - 24,14851}{24,14851 - 9,3} \right]$$

$$Z = 0,29029$$

13. Ikan Kakap (*Lutjanus* sp)

$$Z = 0,01143 \left[\frac{355,30288 - 16,35066}{16,35066 - 4,4} \right]$$

$$Z = 0,32415$$

14. Ikan Kerong – Kerong (*Therapon* spp)

$$Z = 0,05438 \left[\frac{61,51132 - 16,20000}{16,20000 - 9,7} \right]$$

$$Z = 0,37909$$

15. Ikan Layur (*Trihiurusavala* sp)

$$Z = 0,00371 \left[\frac{1133,65894 - 31,28751}{31,28751 - 20,4} \right]$$

$$Z = 0,37562$$

16. Ikan Tuna (*Thunnus* sp)

$$Z = 0,04301 \left[\frac{54,04268 - 17,38000}{17,38000 - 12,3} \right]$$

$$Z = 0,31041$$

17. Ikan Cakalang (*Katsuwonus sp*)

$$Z = 0,01452 \left[\frac{191,26846 - 31,08518}{31,08518 - 21,7} \right]$$

$$Z = 0,24778$$

18. Ikan Kerapu (*Epinephelus spp*)

$$Z = 0,01426 \left[\frac{351,02355 - 25,70835}{25,70835 - 11,9} \right]$$

$$Z = 0,33586$$

19. Ikan Manyung (*Arius spp*)

$$Z = 0,00665 \left[\frac{556,44959 - 32,62052}{32,62052 - 18,8} \right]$$

$$Z = 0,25214$$

20. Cumi – Cumi (*Lolligo spp*)

$$Z = 0,00236 \left[\frac{630,75250 - 8,66232}{8,66232 - 3,2} \right]$$

$$Z = 0,26839$$

Lampiran 4. Gambar Ikan Yang Ditangkap Di Sekitar Kawasan Taman Wisata Perairan (TWP) Pulau Pieh.



Ikan Teri



Ikan Tongkol



Ikan Kembang



Ikan Sarden



Ikan Selar



Ikan Peperek

Lanjutan Lampiran 4.



Ikan Talang - Talang



Ikan Kuwe



Ikan Gole - Gole



Ikan Barakuda



Ikan Layang



Ikan Tenggiri

Lanjutan Lampiran 4.



Ikan Kakap



Ikan Kerong - Kerong



Ikan Layur



Ikan Tuna



Ikan Cakalang



Ikan Kerapu



Ikan Manyung



Cumi - Cumi

Lanjutan Lampiran 4.

