

## **APPENDICES**

# APPENDIX I

## Fishing data of 8.0 m outrigger canoe *Tagiri* in Gomo

(November 1989 to October 1990)

|                                                   |        | NOV    | DEC    | JAN    | FEB   | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP     | OCT    | TOTAL   |
|---------------------------------------------------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|---------|--------|---------|
| <b>PART I</b>                                     |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| 1. Fishingtime                                    |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — Nooffishingtrips                                |        | 6      | 12     | 15     | 6     | 16     | 18     | 17     | 7      | 10     | 11     | 17      | 8      | 143     |
| — Nooffishingdays                                 |        | 12     | 23     | 26     | 6     | 16     | 21     | 22     | 11     | 17     | 19     | 26      | 15     | 214     |
| — Hoursatsea                                      |        | 144    | 292    | 326    | 162   | 202    | 318    | 292    | 126    | 233    | 267    | 414     | 197    | 2973    |
| — Hoursfishing                                    |        | 103    | 177    | 208    | 107   | 123    | 184    | 165    | 75     | 143    | 168    | 261     | 127    | 1833    |
| — Sailtimeeng                                     |        | 41     | 115    | 126    | 55    | 79     | 134    | 127    | 51     | 90     | 99     | 153     | 70     | 1140    |
| <b>PART II</b>                                    |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| 1. Gearwise catch and earnings                    |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — Handline                                        | wgt:kg | 227    | 635    | 636    | 48    | 251    | 829    | 697    | 586    | 844    | 867    | 1032    | 429    | 7081    |
| (Demersal)                                        | val:Rp | 221500 | 725000 | 672000 | 57500 | 222000 | 600000 | 507000 | 463000 | 717500 | 735000 | 940000  | 418500 | 6279000 |
| — Handline                                        | wgt:kg | 30     |        |        | 8     | 6      | 91     | 363    | 80     |        | 2      |         |        | 580     |
| (Pelagic)                                         | val:Rp | 30800  |        |        | 9750  | 5000   | 32000  | 250000 | 49000  |        | 1008   |         |        | 376750  |
| — Trollingline                                    | wgt:kg |        |        | 94     | 32    | 123    | 220    | 32     | 20     | 4      | 6      | 116     | 34     | 681     |
|                                                   | val:Rp |        |        | 44000  | 21000 | 99000  | 126000 | 25000  | 13080  | 2080   | 4080   | 93008   | 30500  | 457508  |
| — Bottom Longline                                 | wgt:kg |        |        |        |       | 63     | 10     |        |        |        |        |         |        | 73      |
|                                                   | val:Rp |        |        |        |       | 60500  | 8000   |        |        |        |        |         |        | 65800   |
| Total                                             | wgt:kg | 257    | 635    | 730    | 88    | 443    | 1150   | 1092   | 686    | 848    | 875    | 1148    | 463    | 8415    |
|                                                   | val:Rp | 251500 | 725000 | 716000 | 88250 | 386500 | 766000 | 782000 | 525000 | 719500 | 740000 | 1033000 | 449000 | 7181750 |
| 2. Specieswise catch and earnings                 |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — SmaliTuna                                       | wgt:kg |        |        |        | 32    | 116    | 220    | 32     | 21     | 4      | 6      | 105     | 26     | 562     |
|                                                   | val:Rp |        |        |        | 21000 | 87000  | 126000 | 25000  | 13008  | 2000   | 4000   | 84000   | 22500  | 384500  |
| — LargeTuna                                       | wgt:kg |        |        | 94     |       |        |        |        |        |        |        | 11      | 8      | 113     |
|                                                   | val:Rp |        |        | 44080  |       |        |        |        |        |        |        | 9000    | 8000   | 61800   |
| — Shark                                           | wgt:kg |        |        |        |       |        | 16     |        | 35     |        | 8      | 20      |        | 79      |
|                                                   | val:Rp |        |        |        |       |        | 7500   |        | 19080  |        | 6000   | 8000    |        | 40500   |
| — Small pelagics                                  | wgt:kg | 30     |        |        | 8     |        | 91     | 369    | 80     |        | 2      |         |        | 580     |
|                                                   | val:Rp | 30080  |        |        | 9750  |        | 32000  | 250000 | 49080  |        | 1000   |         |        | 371750  |
| — Carangids                                       | wgt:kg |        |        | 382    |       | 100    | 185    | 53     | 37     | 13     | 44     | 14      | 8      | 836     |
|                                                   | val:Rp |        |        | 397000 |       | 94508  | 138500 | 44000  | 32508  | 11000  | 36080  | 18000   | 18008  | 781500  |
| — Grouper/Snapper                                 | wgt:kg | 227    | 574    | 239    | 48    | 133    | 556    | 608    | 465    | 796    | 795    | 938     | 421    | 5800    |
|                                                   | val:Rp | 221500 | 656500 | 257500 | 57500 | 136580 | 422500 | 448000 | 397080 | 700500 | 681508 | 891500  | 408500 | 5279000 |
| — Others(Demersal)                                | wgt:kg |        | 61     | 15     |       | 94     | 82     | 30     | 48     | 35     | 20     | 60      |        | 445     |
|                                                   | val:Rp |        | 68500  | 17508  |       | 68500  | 39500  | 15000  | 14500  | 60(8)  | 11500  | 22500   |        | 263500  |
| Total                                             | wgt:kg | 257    | 635    | 730    | 88    | 443    | 1150   | 1092   | 686    | 848    | 875    | 1148    | 463    | 8415    |
|                                                   | val:Rp | 251500 | 725000 | 716000 | 88250 | 386500 | 766000 | 782000 | 525000 | 719500 | 740000 | 1033000 | 449000 | 7181750 |
| <b>PART III</b>                                   |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| 1. Totalsalesvalue                                |        | 251500 | 725000 | 716080 | 88250 | 386500 | 766080 | 782000 | 525000 | 719500 | 740000 | 1033000 | 449000 | 7181750 |
| 2. Variable operational costs                     |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — Fuel (diesel)                                   |        | 17325  | 36000  | 43650  | 17775 | 31050  | 52875  | 51925  | 26908  | 44550  | 45100  | 77825   | 31075  | 476050  |
| — Fuel (kerosene)                                 |        | 1750   | 3325   | 1900   | 600   | 2850   | 8300   | 6250   | 3908   | 4400   | 6100   | 10500   | 2800   | 52675   |
| — LubOil                                          |        | 4008   | 6908   | 3800   | 908   | 2700   | 3600   | 11608  |        | 10800  | 3600   | 9000    |        | 56900   |
| — Food                                            |        | 6450   | 15808  | 19500  | 8850  | 10500  | 22800  | 21908  | 10500  | 15000  | 16508  | 25500   | 12000  | 185300  |
| — Bait                                            |        | 18200  | 54750  | 54650  | 17800 | 18700  | 5000   | 7500   |        | 11750  | 23250  | 62850   | 36850  | 310500  |
| — Ice                                             |        | 6000   | 17350  | 19500  | 9008  | 12500  | 27008  | 32500  | 19500  | 28500  | 29500  | 43408   | 19000  | 263750  |
| — Others                                          |        |        | 900    | 4508   |       |        | 8725   | 9575   | 1600   | 6080   | 8708   | 8800    | 1208   | 50000   |
| Total                                             |        | 53725  | 135025 | 147500 | 54125 | 78300  | 128300 | 141250 | 62400  | 121000 | 132750 | 237875  | 102925 | 1395175 |
| 3. Cashflowbeforepayment tocrewandboatowner (1-2) |        | 197775 | 589975 | 568500 | 34125 | 308208 | 637700 | 640750 | 462600 | 598500 | 607250 | 795125  | 346075 | 5786575 |
| 4. Distiiutionofcashflowto:                       |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — Crew members (50% of3)                          |        | 98887  | 294987 | 284250 | 17062 | 154100 | 318850 | 320375 | 231300 | 299250 | 303625 | 397562  | 173037 | 2893287 |
| 5. Grosscashflow toboat owner (50% of3)           |        | 98887  | 294987 | 284250 | 17062 | 154108 | 318850 | 320375 | 231300 | 299250 | 303625 | 397562  | 173037 | 2893287 |
| 6. Repairs:                                       |        |        |        |        |       |        |        |        |        |        |        |         |        |         |
| — Craft                                           |        |        | 5808   | 4500   |       |        | 15500  | 13250  | 4500   | 37050  |        | 1500    | 13508  | 95600   |
| — Fishing gear                                    |        |        | 13450  | 14508  |       |        | 5608   | 39650  | 17550  | 14850  | 18500  | 31150   | 15800  | 171050  |
| — Engine                                          |        |        |        |        |       |        | 3508   | 750    | 5500   | 66800  | 62025  | 800     |        | 139375  |
| — Sail                                            |        |        |        | 2508   |       |        |        |        |        |        |        |         |        |         |
| — Others                                          |        |        |        |        | 9080  | 33125  | 39408  |        |        |        | 5080   |         |        | 89025   |
| Total                                             |        |        | 19250  | 21500  | 9000  | 33125  | 64000  | 53650  | 27550  | 118700 | 85525  | 33450   | 29300  | 495050  |
| 7. Nett cashflow toboatowner (5-6)                |        | 98887  | 275737 | 262750 | 8062  | 120975 | 254850 | 266725 | 203750 | 180550 | 218100 | 364112  | 143737 | 2398237 |

## APPENDIX II

### Fishing data of 9.7 m outrigger canoe *Tuhu* in Moawe

(May 1989 to March 1990)

|                                                       | MAY    | JUN   | JUL    | AUG    | SEP    | OCT   | NOV    | DEC    | JAN     | FEB | MAR    | TOTAL   |
|-------------------------------------------------------|--------|-------|--------|--------|--------|-------|--------|--------|---------|-----|--------|---------|
| <b>TOTAL</b>                                          |        |       |        |        |        |       |        |        |         |     |        |         |
| <b>PART I</b>                                         |        |       |        |        |        |       |        |        |         |     |        |         |
| 1. Fishing time                                       |        |       |        |        |        |       |        |        |         |     |        |         |
| Nooffshingtrips                                       | 11     | 5     | 21     | 14     | 19     | 7     | 14     | 17     | 18      |     | 10     | 136     |
| Nooffshingdays                                        | 11     | 4     | 21     | 14     | 19     | 7     | 16     | 19     | 19      |     | 10     | 140     |
| Hoursatsea                                            | 69     | 48    | 197    | 159    | 265    | 216   | 203    | 201    | 221     |     | 171    | 1750    |
| Hoursfishing                                          | 40     | 36    | 143    | 114    | 195    | 156   | 147    | 139    | 157     |     | 96     | 1223    |
| Sailtime eng                                          | 29     | 12    | 54     | 45     | 70     | 60    | 56     | 62     | 64      |     | 75     | 527     |
| <b>PART II</b>                                        |        |       |        |        |        |       |        |        |         |     |        |         |
| 1. Gearwisecatchandearnings                           |        |       |        |        |        |       |        |        |         |     |        |         |
| — Driftnet wgt:kg                                     | 47     | 67    | 144    | 163    | 259    | 105   | 119    | 338    | 110     |     |        | 1352    |
| (Traditional) val:Rp                                  | 25600  | 43500 | 93008  | 123508 | 247508 | 84508 | 111500 | 203080 | 77500   |     |        | 1009608 |
| — Handline wgt:kg                                     |        |       |        |        |        |       |        | 40     |         |     | 23     | 63      |
| (Demersal) val:Rp                                     |        |       |        |        |        |       |        | 27008  |         |     | 14000  | 41000   |
| — Handline wgt:kg                                     | 136    | 36    | 418    |        |        |       |        |        | 79      |     | 229    | 898     |
| (Pelagic) val:Rp                                      | 97008  | 23508 | 259775 |        |        |       |        |        | 37580   |     | 147508 | 565275  |
| — Trolling line wgt:kg                                |        |       |        | 10     | 23     |       |        |        |         |     | 61     | 94      |
| val:Rp                                                |        |       |        | 11000  | 35250  |       |        |        |         |     | 25008  | 71250   |
| Total wgt:kg                                          | 183    | 103   | 562    | 173    | 282    | 105   | 119    | 378    |         |     |        | 2407    |
| val:Rp                                                | 122600 | 67000 | 352775 | 134500 | 282750 | 84500 | 111500 | 230000 |         |     |        | 1687125 |
| 2. Specieswisecatch and earnings                      |        |       |        |        |        |       |        |        |         |     |        |         |
| — Pelagicspp wgt:kg                                   | 183    | 67    | 562    | 173    | 282    | 105   | 119    | 378    | 189     |     | 151    | 2209    |
| val:Rp                                                | 122608 | 43500 | 352775 | 134500 | 282750 | 84500 | 111508 | 230000 | 115008  |     | 66500  | 1543625 |
| — Demersalspp wgt:kg                                  |        | 36    |        |        |        |       |        |        |         |     | 162    | 198     |
| val:Rp                                                |        | 23500 |        |        |        |       |        |        |         |     | 128000 | 143500  |
| Total wgt:kg                                          | 183    | 103   | 562    | 173    | 282    | 105   | 119    | 378    | 189     |     | 313    | 2407    |
| val:Rp                                                | 122600 | 67000 | 352775 | 134500 | 282750 | 84500 | 111500 | 230000 | 115000  |     | 186500 | 1687125 |
| <b>PART III</b>                                       |        |       |        |        |        |       |        |        |         |     |        |         |
| 1. Totalsalesvalue                                    | 122600 | 67080 | 352770 | 134500 | 282750 | 84500 | 111500 | 230000 | 1115000 |     | 186500 | 1687120 |
| 2. Variable operationalcosts                          |        |       |        |        |        |       |        |        |         |     |        |         |
| — Fuel (diesel)                                       | 6850   | 2900  | 10308  | 14600  | 23108  | 17600 | 18080  | 32608  | 35000   |     | 26808  | 187750  |
| — Fuel(kerosene)                                      |        |       |        |        |        |       | 2100   | 2500   | 1800    |     | 4600   | 11000   |
| — Lub oil                                             | 1008   |       | 3608   |        | 7200   |       | 3600   | 7200   | 3600    |     |        | 26208   |
| — Food                                                | 5000   | 3500  |        |        |        |       | 21000  | 22508  | 21500   |     |        | 73500   |
| — Bait                                                |        |       |        |        |        |       |        |        | 2500    |     | 18908  | 21408   |
| — Ice                                                 |        |       |        |        |        |       |        |        | 3000    |     | 14508  | 17500   |
| — Others                                              |        |       |        | 700    | 2400   | 2250  | 2408   | 4500   | 3500    |     | 2608   | 18350   |
| Total                                                 | 12850  | 6400  | 13900  | 15300  | 32700  | 19850 | 47100  | 69300  | 70900   |     | 67400  | 355700  |
| 3. Cashflow before payment to crew and boatowner(1-2) | 109750 | 60600 | 338870 | 119208 | 250050 | 64650 | 64408  | 160700 | 44108   | -   | 119108 | 1331420 |
| 4. Distribution of cashflow to: Crewmembers(50% of 3) | 54875  | 30308 | 169435 | 59600  | 125025 | 32325 | 32208  | 80350  | 22050   |     | 59550  | 665710  |
| 5. Gross cashflow to boat owner (50% of 3)            | 54875  | 30308 | 169435 | 59600  | 125025 | 32325 | 32200  | 80350  | 22050   |     | 59550  | 665710  |
| 6. Repairs:                                           |        |       |        |        |        |       |        |        |         |     |        |         |
| — Craft                                               |        |       |        |        |        |       |        |        |         |     |        |         |
| — Fishing gear                                        |        |       |        |        |        |       |        |        | 4508    |     |        | 4500    |
| — Engine                                              |        |       |        |        |        |       |        |        |         |     |        |         |
| — Sail                                                |        |       |        |        |        |       |        |        |         |     | 3000   | 3080    |
| — Others                                              |        |       |        |        |        |       |        |        |         |     |        |         |
| Total                                                 |        |       |        |        |        |       |        |        | 4500    |     | 3000   | 7500    |
| 7. Net cashflow to boat owners (5-6)                  | 54875  | 30300 | 169435 | 59600  | 125025 | 32325 | 32200  | 80350  | 17550   |     | 56550  | 658210  |

## APPENDIX III

### Fishing data of 9.7 m outigger canoe *Tuhu* in Gomo

(April to October 1990)

|                                                         |                    | <i>Apr</i>    | <i>May</i>    | <i>Jun</i>     | <i>Jul</i>     | <i>Aug</i>     | <i>Sep</i>     | <i>Oct</i>    | <i>Total</i>   |
|---------------------------------------------------------|--------------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|----------------|
| Part I                                                  |                    |               |               |                |                |                |                |               |                |
| Fishing time                                            |                    |               |               |                |                |                |                |               |                |
| — No of fishing trips                                   |                    | 18            | 22            | 14             | 15             | 16             | 17             | 9             | 111            |
| — No of fishing days                                    |                    | 20            | 23            | 14             | 20             | 25             | 22             | 16            | 140            |
| — Hours at sea                                          |                    | 324           | 394           | 298            | 358            | 389            | 404            | 222           | 2389           |
| — Hours fishing                                         |                    | 209           | 230           | 201            | 247            | 261            | 272            | 153           | 1573           |
| — Sail time eng                                         |                    | 115           | 164           | 97             | 111            | 128            | 132            | 69            | 816            |
| Part II                                                 |                    |               |               |                |                |                |                |               |                |
| Gearwise catch and earnings                             |                    |               |               |                |                |                |                |               |                |
| — Handline                                              | wgt:kg             | 453           | 539           | 928            | 1730           | 1548           | 1096           | 225           | 6519           |
| (Demersal)                                              | val:Rp             | 377080        | 323008        | 691508         | 1374450        | 1423100        | 1141800        | 2520000       | 5582850        |
| — Handline                                              | wgt:kg             | 90            | 409           | 348            | 43             | 73             |                |               | 963            |
| (Pelagic)                                               | val:Rp             | 55000         | 268225        | 237425         | 21250          | 54908          |                |               | 636808         |
| — Trolling line                                         | wgt:kg             | 427           | 312           | 136            | 69             | 22             | 227            | 110           | 1303           |
|                                                         | val:Rp             | 246300        | 209400        | 101600         | 56300          | 20508          | 231650         | 106250        | 972800         |
| Total                                                   | wgt:kg             | 970           | 1260          | 1412           | 1842           | 1643           | 1323           | 335           | 8785           |
|                                                         | Val:Rp             | 678300        | 800625        | 1030525        | 1452000        | 1498500        | 1373450        | 358250        | 7191650        |
| 2. Specieswise catch and earnings                       |                    |               |               |                |                |                |                |               |                |
| — Small tuna                                            | wgt:kg             | 427           | 312           | 136            | 69             | 22             | 227            | 110           | 1303           |
|                                                         | val:Rp             | 246300        | 209400        | 101608         | 56300          | 20500          | 231650         | 106250        | 972008         |
| — Small pelagics                                        | wgt:kg             | 75            | 409           | 348            | 43             | 73             |                |               | 948            |
|                                                         | val:Rp             | 45008         | 268225        | 237425         | 21250          | 54900          |                |               | 626808         |
| — Carangids                                             | wgt:kg             | 91            | 83            | 10             | 45             | 46             | 20             | 12            | 307            |
|                                                         | val:Rp             | 79000         | 43508         | 7500           | 27000          | 39500          | 24008          | 14080         | 234508         |
| — Grouper/Snapper                                       | wgt:kg             | 257           | 417           | 905            | 1610           | 1475           | 1072           | 213           | 5949           |
|                                                         | val:Rp             | 229508        | 252508        | 676500         | 1301450        | 1356600        | 1115800        | 238008        | 5170350        |
| — Others (Demersal)                                     | wgt:kg             | 120           | 39            | 13             | 75             | 27             | 4              |               | 278            |
|                                                         | val:Rp             | 78508         | 27008         | 7508           | 46000          | 27000          | 2000           |               | 188000         |
| Total                                                   | wgt:kg             | 970           | 1260          | 1412           | 1842           | 1643           | 1323           | 335           | 8785           |
|                                                         | val:Rp             | 678300        | 800625        | 1030525        | 1452008        | 1498508        | 1373450        | 358250        | 7191650        |
| Part III                                                |                    |               |               |                |                |                |                |               |                |
| <b>Total</b>                                            | <b>sales value</b> | <b>678308</b> | <b>808625</b> | <b>1030525</b> | <b>1452000</b> | <b>1498508</b> | <b>1373450</b> | <b>358250</b> | <b>7191650</b> |
| 2. Variable operational costs                           |                    |               |               |                |                |                |                |               |                |
| — Fuel (diesel)                                         |                    | 39270         | 58995         | 50600          | 55080          | 66825          | 6737           | 46750         | 384815         |
| — Fuel (kerosene/petrol)                                |                    | 6900          | 10150         | 9650           | 6150           | 9350           | 4800           | 2150          | 49150          |
| — Lab oil                                               |                    | 22500         | 9000          | 12600          | 14400          | 18080          | 10800          | 7200          | 94500          |
| — Food                                                  |                    | 11250         | 17000         | 4000           |                | 4850           | 15550          | 8800          | 61450          |
| — Bait                                                  |                    | 4500          | 400           |                | 3000           | 4000           |                | 6050          | 17950          |
| — Ice                                                   |                    | 20500         | 30808         | 34008          | 46508          | 47780          | 46500          | 22575         | 248575         |
| — Others                                                |                    | 5508          | 13350         | 12625          | 2900           | 8575           | 5050           | 4800          | 52808          |
| Total                                                   |                    | 110420        | 139695        | 123475         | 127950         | 159300         | 150075         | 98325         | 909240         |
| 3. Cashflow before payment to crew and boat owner (1-2) |                    |               |               |                |                |                |                |               |                |
|                                                         |                    | 567880        | 660930        | 907050         | 1324050        | 1339208        | 1223375        | 259925        | 6282410        |
| 4. Distribution of cashflow to:                         |                    |               |               |                |                |                |                |               |                |
| — Crew members (50% of 3)                               |                    | 283940        | 330465        | 453525         | 662025         | 669600         | 611687         | 129962        | 3141205        |
| 5. Gross cashflow to boatowner: (50% of 3)              |                    |               |               |                |                |                |                |               |                |
|                                                         |                    | 283940        | 330465        | 453525         | 662025         | 669600         | 611687         | 129962        | 3141205        |
| 6. Repairs:                                             |                    |               |               |                |                |                |                |               |                |
| — Craft                                                 |                    | 15580         | 11725         | 7708           | 58850          | 650            | 650            | 2508          | 97575          |
| — Fishing Gear                                          |                    | 7175          | 68600         | 41150          | 14950          | 18875          | 23400          | 15375         | 189525         |
| — Engine                                                |                    | 59000         | 9950          | 8650           | 80900          | 31000          | 34650          | 127108        | 351250         |
| — Sail                                                  |                    |               |               |                |                |                |                |               |                |
| — Others                                                |                    | 42800         | 4208          | 5508           | 3000           | 7775           | 18750          | 4500          | 85725          |
| Total                                                   |                    | 123675        | 94475         | 63000          | 157700         | 58300          | 77450          | 149475        | 724075         |
| 7. Nett cashflow to boatowner (5-6)                     |                    |               |               |                |                |                |                |               |                |
|                                                         |                    | 160265        | 235990        | 390525         | 504325         | 611300         | 534237         | -19513        | 2417130        |

## APPENDIX IV

Economic evaluation: INS-2. 8.0 m outrigger canoe *Tagiri* operated from Gomo

|     |                                                   |                  |
|-----|---------------------------------------------------|------------------|
| 1.  | Total investment                                  | Rp 3,700,000     |
| 2.  | Value of yearly catch                             | Rp 7,182,000     |
| 3.  | Variable operational cost                         | <i>Rp.</i>       |
|     | Fuel + Oil                                        | <b>586,000</b>   |
|     | Food                                              | 185,000          |
|     | Bait                                              | 310,000          |
|     | Ice                                               | 264,000          |
|     | Others                                            | 50,000           |
|     | <b>Total</b>                                      | <b>1,395,000</b> |
| 4.  | Net income before payment to crew members (2 - 3) | 5,787,000        |
| 5.  | Crew share (50% of 4)                             | 2,893,500        |
|     | Income per crew member (three crew)               | (964,000)        |
| 6.  | Boat-owner's share (50% of 4)                     | 2,893,500        |
| 7.  | Repairs                                           |                  |
|     | Craft                                             | 74,000           |
|     | Engine                                            | <b>152,000</b>   |
|     | Fithing gear                                      | <b>136,000</b>   |
|     | Others                                            | 50,000           |
|     | <b>Total</b>                                      | <b>412,000</b>   |
| 8.  | Net income to boat-owner (6 - 7)                  | 2,481,500        |
| 9.  | Depreciation                                      | <b>670,000</b>   |
| 10. | Net yearly return (8 - 9)                         | 1,811,500        |
| 11. | Accounting rate of return<br>(10/1 x 100)         | <b>49%</b>       |

## APPENDIX V

### Estimated cost of INS-S outrigger canoe (8.6 m)

(Based on quotation by Toko Kanya Baru, Gunung Sitoli, in Rp. (November 1990))

| <i>Item</i>                                             | <i>Unit</i>    | <i>Qty</i> | <i>Unit/Cost<br/>Rp.</i> | <i>Cost<br/>Rp.</i> |
|---------------------------------------------------------|----------------|------------|--------------------------|---------------------|
| 1. Timber                                               | m <sup>3</sup> | 1.45       | 300,000                  | 435,000             |
| 2. Machining charges                                    | m <sup>3</sup> | 1.45       | 85,000                   | 123,000             |
| 3. Hot dip galvanized nails:                            |                |            |                          |                     |
| 1-3/4" × 10 g                                           | kg             | 8          | 4,000                    | 32,000              |
| 2" × 8 g                                                | kg             | 1.5        | 4,000                    | 6,000               |
| 3" × 8 g                                                | kg             | 1          | 4,000                    | 4,000               |
| 4. Hot dip galvanized bolts –<br>cup head with one nut: |                |            |                          |                     |
| 1-1/4" × 1-1/2"                                         | pc             | 110        | 150                      | 16,500              |
| 3/8" × 3"                                               | pc             | 70         | 210                      | 14,700              |
| 3/8" × 5"                                               | PC             | 36         | 345                      | 12,420              |
| 3/8" × 6"                                               | pc             | 12         | 405                      | 4,860               |
| 3. Hot dip galvanized<br>round rod: 3/8"                | m              | 3.0        | 3,000                    | 9,000               |
| 1/2"                                                    | m              | 1.0        | 4,000                    | 4,000               |
| 4. Hot dip galvanized<br>nuts: 3/8"                     | pc             | 26         | 60                       | 1560                |
| 1/2"                                                    | Pc             | 12         | 90                       | 1080                |
| 5. Hot dip galvanized<br>washers 3 mm thick:            |                |            |                          |                     |
| For 1/4" bolts                                          | Pc             | 110        | 20                       | 2,200               |
| For 3/8" bolts                                          | pc             | 150        | 30                       | 4,500               |
| For 1/2" bolts                                          | PC             | 24         | 40                       | 960                 |
| 6. Hydroseal (Bitum comp)                               | kg             | 18         | 5,000                    | 90,000              |
| 7. Damar (filler)                                       | kg             | 1.5        | 600                      | 900                 |
| 8. Wood primer                                          | lt             | 12         | 4,800                    | 57,600              |
| 9. Gloss paint                                          | lt             | 10         | 5,000                    | 50,000              |
| 10. Turpentine                                          | lt             | 3          | 2,000                    | 6,000               |
| 11. Traditional outriggers<br>and beams                 |                |            | -                        | 50,000              |
| 12. Tarpaulin 12m <sup>2</sup>                          |                |            |                          | 20,000              |
| 13. Sail 20m <sup>2</sup>                               |                |            |                          | 35,000              |
|                                                         |                |            | Total materials          | 981,280             |
| 14. Labour two men for<br>1 1/2 months                  |                | 72         | 3,500                    | 252,000             |
| <b>Total cost (materials + labour)</b>                  |                |            |                          | <b>1,233,280</b>    |

## APPENDIX VI

### Estimated cost of engine and engine installation of INS-S outrigger canoe (8.6 m)

(November 1990)

| <i>Item</i>                                             | <i>Unit</i> | <i>Qty</i> | <i>Unit/Cost<br/>Rp.</i> | <i>Cost<br/>Rp.</i> |
|---------------------------------------------------------|-------------|------------|--------------------------|---------------------|
| 1. Diesel engine YANMAR<br>TF 75h di 6.5 hp/220 rpm     | pc          | 1          | 1,950,000                | 1,950,000           |
| 2. Coupling shaft-propeller                             | pc          | 2          | 50,000                   | 100,000             |
| 3. Propeller shaft SS<br>22 mm x 1600 mm                | pc          | 1          | 90,000                   | 90,000              |
| 4. Propeller bronze<br>diameter: 9 1/2"<br>pitch 6 1/2" | PC          | —          | 20,000                   | 20,000              |
| 5. Stern tube brass<br>1:800 mm between flanges         | pc          | 1          | 75,000                   | 75,000              |
| 6. Shaping and fitting of stern gear                    | —           | —          | —                        | 30,000              |
| 7. Steel engine bed                                     | PC          | 1          | 40,000                   | 40,000              |
| 8. Exhaust pipe                                         | pc          | 1          | 30,000                   | 30,000              |
| 9. Skinfitting cooling pipe                             | pc          | 1          | 15,000                   | 15,000              |
| 10. Rubber hose for cooling<br>system, heatproof        | m           | 6          | 4,000                    | 24,000              |
| 11. Hose clamps                                         | pc          | 4          | 500                      | 2,000               |
| 12. Rudder pintles                                      | set         | 1          | 20,000                   | 20,000              |
| 13. Greasy hemp for<br>stuffing box                     | m           | 0.5        | 2,000                    | 1,000               |
| Total cost of engine<br>(with installation)             |             |            |                          | 2,397,000           |

## PUBLICATIONS OF THE BAY OF BENGAL PROGRAMME (BOBP)

The BOBP brings out the following types of publications:

**Reports (BOBP/REP/...)** which describe and analyze completed activities such as seminars, annual meetings of BOBP's Advisory Committee, and subprojects in members-countries for which BOBP inputs have ended.

**Working Papers (BOBP/WP/...)** which are progress reports that discuss the findings of ongoing BOBP work.

**Manuals and Guides (BOBP/MAG/...)** which are instructional documents for specific audiences.

**Information Documents (BOBP/INF/...)** which are bibliographies and descriptive documents on the fisheries of member-countries in the region.

**Newsletters (Bay of Bengal News)** which are issued quarterly and which contain illustrated articles and features in non-technical style on BOBP work and related subjects.

Other publications which include books and other miscellaneous reports.

A list of publications from 1986 onwards is given below. A complete list of publications is available on request.

### Reports (BOBP/REP/...)

23. **Summary Report of BOBP Fishing Trials and Demersal Resources Studies in Sri Lanka.** Madras, March 1986.)
24. **Fisherwomen's in Bangladesh: A Participatory Approach to Development.** P. Natpracha, (Madras, May 1986.)
25. **Attempts to Stimulate Development Activities in Fishing Communities in Adirampattinam, India.** P. Natpracha, V.L.C. Pietersz. (Madras, May 1986.)
26. **Report of the Tenth Meeting of the Advisory Committee.** Male, Maldives. 17-18 February 1986. (Madras, April 1986.)
27. **Activating Fisherwomen for Development through Trained Link Workers in Tamil Nadu, India.** E. Drewes. Madras, May 1986.)
28. **Small-scale Aquaculture Development Project in South Thailand: Results and Impact.** E. Drewes. (Madras, May 1986.)
29. **Towards Shared Learning: An Approach to Non-formal Adult Education for Marine Fisherfolk of Tamil Nadu, India.** L.S. Saraswathi and P. Natpracha. (Madras, July 1986.)
30. **Summary Report of Fishing Trials with Large-mesh Driftnets in Bangladesh.** (Madras, May 1986.)
31. **In-service Training Programme for Marine Fisheries Extension Officers in Orissa, India.** U. Tietze. (Madras, August 1986.)
32. **Bank Credit for Artisanal Marine Fisherfolk of Orissa, India.** U. Tietze (Madras, May 1987.)
33. **Non-formal Primary Education for Children of Marine Fisherfolk in Orissa, India.** U. Tietze, Namita Ray. (Madras, December 1987.)
34. **The Coastal Set Bag Net Fisher of Bangladesh - Fishing Trials and Investigations.** S.E. Akerman. (Madras, November 1986.)
35. **Brackishwater Shrimp Culture Demonstration in Bangladesh.** M. Kanm. (Madras, December 1986.)
36. **Hilsa Investigations in Bangladesh.** (Colombo, June 1987.)
37. **High-Opening Bottom Trawling in Tamil Nadu, Gujarat and Orissa, India: A Summary of Effort and Impact.** (Madras, February 1987.)
38. **Report of the Eleventh Meeting of the Advisory Committee,** Bangkok, Thailand, March 26-28, 1987, (Madras, June 1987.)
39. **Investigations on the Mackerel and Scad Resources of the Malacca Straits.** (Colombo, December 1987.)
40. **Tuna in the Andaman Sea.** (Colombo, December 1987.)
41. **Studies of the Tuna Resource in the EEZs of Sri Lanka and Maldives.** (Colombo, May 1988.)
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43. **Report of the Thirteenth Meeting of the Advisory Committee.** Penang, Malaysia, 26-28 January, 1989. (Madras, March 1989.)
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46. **Exploratory Fishing for Large Pelagic Species in the Maldives.** R.C. Anderson and A. Waheed, (Madras, December 1990.)
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*Helping Fisherfolk to Help Themselves: A Study in People's Participation.* (Madras, 1990.)

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