	a. Boat b. Gears c. Engine	Boat Services (2 x setahun) Gillnet improvement, rope, etc. Regularly Engine Service/month		3.000.000 3.000.000 1.000.000
Maintenance Cost				7.000.000
Fixed Cost (Depreciation Cost + Maintenance Cost)				14.900.000
3	Variable Costs/Operational Costs	Volume /trip	Price per Unit (Rp)	Total Cost/year (Rp)
	a. Bahan bakar bensin b. Pelumas (oli) c. Beli kayu salam d. Upah tumbuk kayu salam e. Konsumsi f. Pembayaran upah nelayan sistem bagi hasil	20 ltr x 240 trip 2 ltr/ 3 months 72 unit/tahun 2 men 10.000/day -	4.500/ltr 25.000/ltr 35.000 50.000/man - -	Rp. 21.600.000 Rp. 600.000 Rp. 2.520.000 Rp. 1.200.000 Rp. 31.200.000 Rp. 249.600..000
Total variable cost				**Rp. 304.410.000**

Source : Primary Data (2012).

From the calculation above, the obtained value of the total cost (total cost) results from the sum of the fixed costs (fixed costs) and variable costs (variable costs). So the total cost is as follows:

TC = FC + VC

= Rp. 14.900.000+ Rp 304 410 000

= Rp. 319,310,000 / year

The importance of the total cost (TC) were issued in one year is Rp. 319,310,000 / year.

Revenue

a. Gross Income (**Gross** Income)

Gross income of an owner is revenue earned by the fishermen in the form of a sum of money, as a result of the sale of fish produced. Gross income (gross income) is calculated based on production volume multiplied by the prevailing market price of each species.

Fishermen go fishing in a month on average 26 days at sea with a number of trip 1-4 times a day with uncertain catches, sometimes more and sometimes less, but at least fishermen get some fish for them to eat at home when the catches just a little bit so it can not be sold.

Based on the results of interviews with business owners, there are 3 fishing season, the peak fishing season, middle seasons and scarcity of fish season, while the price fluctuate depending on the market price and volume of fish stocks in the market, as detailed in Table 5.

Table 5. Revenue according to catch season in 1 year

No	Musim	Catches	Price	Total
1	Southeast season October-January Peak	400 basin (8000 kg)	Rp.22.000/kg	Rp. 176.000.000
2	**West Season** May-October Middle	200 basin (4000 kg)	Rp.22.000/kg	Rp. 88.000.000
3	**East Season** February-May Famine	100 basin (2000 kg)	Rp.30.000/kg	Rp. 60.000.000
				Rp. 324.000.000

Source : The results of interviews with beach seine owners (Primary Data 2012).

According to the records and information of the beach seine owner Mr. Zainal Malay they distribute the money of the nett income is 30 % to the owner of fishing gear and the rest they bring to the fishermen and crew.

Table 6. Production and sales results of the beach seine owner (Mr. Zainal).

No	Date	Production(kg)	Sale(Rp)	Expenditure (Rp)	Results(Rp) (hari)
1	03-29-2012	1.5 basin	Rp. 500.000	Rp. 40.000	**Rp. 460.000**
2	03-30-2012	1 basin	Rp. 300.000	Rp. 40.000	**Rp. 260.000**
3	03-31-2012	8 (kg)	Rp. 230.000	Rp. 30.000	**Rp. 200.000**
4	04-01-2012	2 basin	Rp. 675.000	Rp. 40.000	**Rp. 635.000**
5	04-02-2012	1.5 basin	Rp. 400.000	Rp. 50.000	**Rp. 350.000**
6	04-03-2012	7.5 (kg)	Rp. 210.000	Rp. 40.000	**Rp. 180.000**
7	04-04-2012	1.5 basin	Rp. 365.000	Rp. 50.000	**Rp. 315.000**
	Jumlah		**Rp.2.680.000**	**Rp.290.000**	**Rp.2.400.000**

Source : Primary Data (2012).

b. Net Income

The net income are all the results obtained from the real beach seine fishing effort for one year. Production revenues calculated from the difference between total revenue (gross revenue) and total cost (total cost).

The net income (net income) = GI - TC

= Rp. 324.000.000 - Rp. 319 310 000

= Rp. 4.690.000/year

c) Financial Analysis

Determining the feasibility of beach seine fishing effort in the Village of South Bungus cost of using formula Benefit ratio (BCR), Financial Rate of Return (FRR), (Kadariah, 1998) and Payback Period of Cafital (PPC) (Riyanto, 1983).

Table 7. Financial fasibility parameter of beach seine.

No	Parameter	Value	Description
a.	Benefit cost of ratio (BCR),	1,0	Impas
b.	Financial Rate of Return (FRR)	11 %	Lower than the bank rate
c.	Payback Period of Cafital (PPC)	8,53 years	Payback takes time.

Source: Data Processed.

3. Discussion

Analysis of Sustainable Fisheries

Trend fishing technology development focused on technology environmentally friendly fishing practices (environmental friendly fishing tecnology) in the hope of a sustainable use of fisheries resources. Fishing technology is an environmentally friendly fishing gear that does not give negative impact to the environment, ie the extent to which fishing gear does not damage the bottom, no negative impact on biodiversity, target resources and non-target resources. In accordance with the code of conduct responsible fisheries (FAO, 1995) that the fishing activities should ensure the sustainability of exploitation of fish resources.

From the evaluation results of obtained weighting assessment set point number totally are 17 that mean the beach seine in southern Bungus village is less environmentally friendly.

Table 8. Criteria capture technologies that are environmentally friendly according to the FAO (1995).

No	Criteria of eco-friendly fishing gear according to FAO (1995)	1	2	3	4
1.	Gear must have a high selectivity..	4			
2.	Fishing gear used does not damage the habitat, shelter and breeding of fish and other organisms		3		
3.	Not harm the fishermen.			2	
4.	Produce good quality fish.				0
5.	The product does not harm the health of consumers.				0
6.	Wasted catches is minimum.		3		
7.	Fishing gear used should provide minimum impact on resource diversity (biodiversity).			2	
8.	Not capturing protected species legislation or endangered.		3		
9.	Socially acceptable.				0
	Total		17		

Judging from the nine criteria established by the FAO (1995) about the eco-friendly fishing technology, the first beach seine gear caught more than three species with vastly different sizes, the main target is anchovy, although beach seine gear can caught Horse-Eye Jack, Dussumier's Pony Fish, Squid dan Goatfish which are sold in the market. Both beach seine fishing gear cause habitat destruction on small areas. It can be seen from the results in reduced catches and fishing gear is the working principle of the dredge to the bottom waters. Third, the gear is not harmful fishing gear and beach seine gear is how its use can result in a temporary health problems. views of the beach seine gear operation requires power and full power , so it can harm the health of fishermen. The four beach seine gear live fish and fresh produce, this is because the working principle of this gear catches fish then bracketing obtained fresh and alive and safe for consumers.

Top of Form

Catch (by-catch) is a wasted beach seine consists of several types of fish that are not sold in the market like a puffer fish. Fishing gear and beach seine fishing operations cause the deaths of several species but does not damage the habitat, the fish were caught fishing gear typically experience fatigue physical damage and death due to swimming in the net mesh sizes were very small at 0.7 cm and the gear is not environmentally friendly and habitat damage seen from the dredge works prinsif bottom waters. Beach seine fishing gear fishing've protected several times. And beach seine gear is very welcome in the Village South Bungus because gear is very simple and more economical than the other gear. And this beach seine gear hapir all the criteria set by the FAO (1995) are met and beach seine gear is classified into environmentally friendly fishing gear.

Judging from the construction of beach seine fishing gear that is in the Village of South Bungus, beach seine conditions at the sites in terms of technical resources have not been able to preserve the small fish being targeted. This is indicated by the mesh sizes on the bag that only 0.7 cm. while the corresponding regulatory mesh which is set FAO (1995) the minimum mesh size is 1 inch.

Beach seine terms of sustainable utilization of fish resources, indirectly had cut the food chain for larger fish, seen from the dredge basic working principles of the waters and beach seine catches are small fish which are a source of food fish in great number, but when viewed from local tourism visit, beach seine should be preserved because it has special appeal to the community, both local people and for tourists who visit the city of Padang.

Business Profitability

Profitability of a fishery can be measured by connecting the gains or profits derived from the capture of the capital used to produce profit.

Profitability shows the amount of interest that can be generated by the investment of total wealth. In order for these investments to be accounted for the profits derived must be higher than the interest rate to be paid or accounted for. (Nuraini and Hidayat, 2011). from data obtained by beach seine fishermen investment consists of the purchase of boats, engines and fishing gear beach seine is Rp 40,000,000.

Soekartawi (2002), the income of fishermen is the difference between revenues and all costs (total cost). Admission fisher production obtained multiplying the selling price. Costs fishers usually classified into two: the fixed costs (fixed costs) and variable costs (variable costs). Fixed costs (fixed cost) is relatively fixed cost incurred in number and continue production even earned a lot or a little. variable costs (variable costs) are costs that are influenced by the size of the production obtained.

Sukirno (2006), revenue is the amount of income received by the top of his performance during the period, either daily, weekly, monthly, or yearly. Perikann feasibility beach seine in the Village of South Bungus measured by several indicators, namely: Benefit Cost of Ratio (BCR), Financial Rate of Return (FRR), and Payback Period of Cafital (PPC). From the results perhitunagan has done that beach seine fishing effort in the Village of South Bungus continue or not depends on the investor concerned, this is seen from a B / C = 1.

Economically beach seine fishing effort is not worth it to continue if seen from the state of the field, and from the income of fishermen every day is not sufficient for daily needs. However, because the beach seine fishing effort has been done for generations by the local fishermen and the absence of a better job option given the low level of local fishermen, so the business is still running even though the results the less profits.

4. CONCLUSIONS AND RECOMMENDATIONS

Conclusion

From the results of the evaluation with reference to the criteria of FAO (1995) the beach seine gear of South Bungus can be classified into gear a less friendly environmental.

Judging from the indicators of the feasibility of beach seine is a business that values high enough investment but the revenue is subsistence, the payback period is quite long, but the effort is more labor intensive and is one of Bungus coastal marine attraction, so it deserves to be preserved because it has the power attraction for the community, both local people and for tourists who visit the city of Padang.

Mesh sizes used in the beach seine is small so that it is not selective.

Suggestion

To support beach seine fishing technology that is environmentally friendly and sustainable, it needs to be done as following efforts:

a. Mesh size in the pocket of beach seine must enlarged to free small fish not caught
b. Need to change the design on the inside and the length of the wing to further expand the coverage area of fishing operations, and especially in the improvement of selectivity.

c. As an iconic attraction and labor-intensive effort, it is expected that the local government to pay more attention again fishing conditions in the Village South Bungus like to provide assistance or loan capital with a lower interest rate.

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REFERENCES

Ayodhyoa.1975.Fishing Methods dictate of Science Lecture Fishing Techniques. Departmente of Fishing Technolgy,Faculty of Fisheries IPB. Bogor. Charles. A.T. 1994. Towards Sustainability: The Fishery Experience. Ecological economis, 11:201-211.

Department of Marine and Fisheries of Padang West Sumatra Province., 2010. Reports Kelauatn and Fishery Department of West Sumatra Province. Office of Fisheries. West Sumatra Province.

FAO. 1995. Code of Conduct for Responsible Fisheries. FAO Fisheries Department. 24p. (Online) (http://fao/fisheries/code. Accessed January 2012). Kadariah. 1978. Introduction to Project Evaluation. Publisher Institute Faculty of Economics, University of Indonesia. Jakarta 104 pages.

Monintja, D.R, 1991. Technology Utilization of Marine Biological Resources Ii. (College textbook). Bogor: Higher Education Enhancement Project, Bogor Agricultural University. Pages 33-35.

Najamuddin. , 2009. Design Build Fishing Equipment. Lecture Module. Faculty of Marine Sciences and Fisheries, University of Hasanuddin Makassar. Online www.unhas.ac.id.

Nikijuluw, VH. 2002. Sasi As A Community Based Resource Management (Psbk) In Saparua Maluku, marine fisheries research journal no. 93 In 1994, Marine Fisheries Research Institute, National Agricultural Research, Ministry of Agriculture, Jakarta.

Nuraini, Ida. Herman Hidayat. 2001.Manajemen Farming. Publisher Center Open University. Jakarta.

Nybakken WJ. 1988. Marine Biology An Ecological Approach. Translation Eidman et al. Marine Ecology An Ecological aproach. New York: Scholastic.

Rahardi, F, 2003. Agribusiness Fisheries, Governmental spreader. Jakarta. 63 pages.\

Soekartawi.2002. Analysis of Farming. UL-Press. Jakarta.

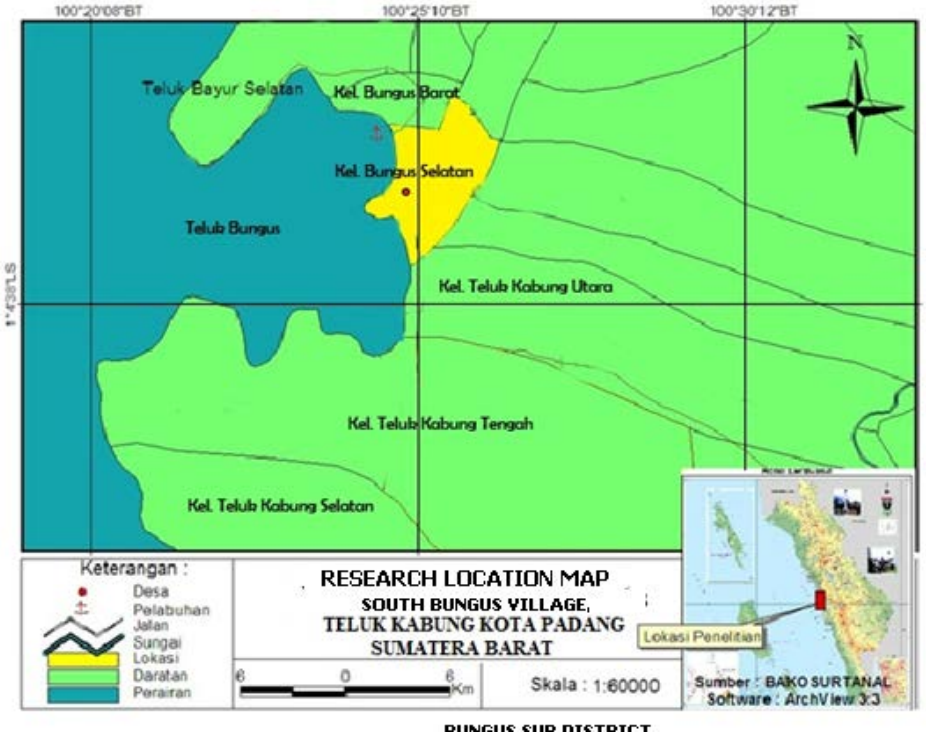
Sukirno. S., 2006. Macroeconomics. King Grafindo Persada, Jakarta.

Omar H. , 2003. Business Feasibility Study Edition II. Engineering Feasibility Analyzing Comprehensive Business Plan. New York: Scholastic Press. 462 p.

Von Brandt A. 1984. Fishing Catching Methods of the World. Farnham-Surrey-England: FAO Fishing News Books, Ltd..

http://id.wikipedia.org/wiki/Ari_purbayanto. Visited January 2012

. **Annex 1. Map of Research Location.**



Annex 2.

Catches of Beach Seine:

Squid (*Loligo sp*)

Goatfish (*parupeneus sp)*

Dussumier's Pony Fish)

Anchovy (*Stolephorus sp*)

Horse-Eye Jack .

Catches of Beach Seine.