

The Role of Women on Economic Activities and Their Contribution to Household Income of The Traditional Fisheries in West Sumatra

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ABSTRACT

The objective of this study is to analyze the role of women on the household economy of the traditional fisheries in West Sumatra. The study was conducted in mid year of 2012 to the-90 respondents of women; consisting of fish products processors, traders and women workers for each 30 respondents in the 2 (two) locations of Padang Municipality and Padang Pariaman District, West Sumatra. Analyses were performed by using descriptive, qualitative and GAP analysis. The results of study indicated that women (wife of fishermen) working in the traditional fishery spent most of their time for about 5.80 hours per-day (or of about 139 hours/months). They were able to give contribution to household income on average 27.33% of the total. There are several factors that effects on the contribution to household income, namely; level education of women and working time allocation. To increase the household economic activities of the traditional fisheries in the coastal line areas, endorsement from the government and private sectors in terms of employment and other business opportunities are very important, both fishery sector and other sectors.

Keywords: gender, women, household income, traditional fisheries

INTRODUCTION

West Sumatra is one of the 33 provinces of Indonesia situated along the coastal line facing fishing zone in the Indian Ocean. Having huge oceanic potential of the region is not yet able to manage the potential in contributing economic of the coastal community and the region. It was indicated by poor management of its marine development sector in terms of fishery activities. The region has a large numbers of traditional fisheries, that from 9,913 fishing fleet they were supported with 85% non motorized and out board motor fishing boats. Majority of those included the traditional fisheries.

The characteristic of traditional fisheries are shown with simple fishing equipment used and lower technology applied by fishermen with poor management of which tends to manage subsistent. The implication of that their fish production and income are also lower. For the continuity of domestic life, women play an important role to find for alternative income to provide for the household economy (Zein, 2011).

According to Agus (2002), the role of women in fishermen household may become one of the alternatives in contributing additional income for their family, so that it can help increase economic power of the fishermen household, especially at the time of low production. The traditional fishermen generally contribute insufficient income during low production time of which makes women and the women members of the family play an important role in contributing alternative income to cover expenditures of the fishermen household. Economic hardship in the household were motivated of women to further encourage for working in informal employment, especially with very low wages (poorly paid job), so called distress sale of labor. Contribution of women's income is always less than men in the economic structure of the family, although they contribute higher time (Elson, 1999 *in* IFAD, 2011).

Women disposition have a real dual role that is involved in earning for a living. In making a living, option of economic activities of women of poor households, either reproduction or production depends upon the decision-making process within the family. This study has been conduct to analyze the role of women to support of household economy in traditional fishery in West Sumatra.

Objective of the study

The objective of this study is made to analyze the role of women in economic households of the traditional fishermen in West Sumatra



METHODOLOGY

The study was conducted in mid year of 2012 in the coastal areas of Padang Municipality and Padang Pariaman District. The two areas were deliberately chosen because the two represents the condition of other coastal areas in West Sumatra. Both of the areas have relatively the same condition and characteristic of its people as they were formerly administered under system of the regions.

Sample was taken 90 women or wives of local traditional fishermen that consists of 3 groups of profession. They were respectively; 30 women working in the fish processing products, 30 women working in trading of fish and the last 30 women working as labor in the fishery business.

The data collected consists of primary and secondary data. Primary data were directly obtained from the respondents through interviews and the secondary data were obtained from various information sources, such as reports and literatures available in various agencies.

Analyses of data were performed by using descriptive and qualitative method. To see the range or differences on the analysis results achieved by the various professions with the standardized GAP analysis of which was then followed with multiple regression analyses in order to see the factors that affect the woman's income.

RESULT OF THE STUDY

Profile of women in the traditional fisheries

There were 10,974 fishermen in number in West Sumatra, around 52.85% of the total fishermen population where some of them worked traditionally (Marine and Fisheries Service West Sumatra, 2012). Generally, the traditional fishermen of the areas have poor economic condition as seen from the low fishery production that have an impact on low income. This condition as such will also have an impact on poor condition of their dwelling house, health and nutrition, education, environmental sanitation of the fishermen household. In Asian women has categorized as poor community, including in coastal region where the source of life is very dependent on natural resources (IFAD, 2002).

In order to meet economic needs of the household, women in fishermen family play an important role to help their household condition by working whatever the job as to meet their household needs for food, clothes, children education, etc. Of the three kinds of the women's jobs surveyed with the respondents of fishery traders, fish processing products and other labor works. The socio-economic conditions of women in fishermen family can be described as follows:

Seen from the age of respondents were evenly aged 40.21 years old, where the average age whose worked as the processor of fishery products seemed to be older, while those who worked as fish traders were aged 35.23 years old. Group of women working as fish traders were found relatively young. It was assumed that they need time and more strength, agility and aggressiveness in trading activities to many different places of the region.

Average education of the respondents were 8.6 years of age, where women who worked as the fish products processors have higher level of education that equals to the first grade of senior high school, while those who have lower education were found in groups of women working as fish traders that only equals to elementary school graduates. With such a great number of groups who have high level of education of fish products processors, because they have attended lots of training which requires basic literacy of having ability to read and write adequately.

Average number of family members of the traditional fishermen household was 4.6 people that reflect every fishermen household have 2.6 children excluded parents. The fishermen household having more children was found in groups of women working as the traders for about 5.17 children on average that reflects every fishermen household has at least 3 children. From existing note shows that there were some fishermen households who still have 8 children or more. Average number of age, education, family members of traditional fishermen household was described in the Table 1.

Table1. Average age, education level, and number of family members in traditional fishermen household

Profession	Age of Respondents	Women's Education	Number of Family members
Traders	35.23	6.8	5.17
Working as Fishery processing products	43.53	10.33	4.4
Worker/Labor	41.87	8.8	4.4
		26	14
		8.64	4.65



Economic activity of women and their contribution to household income

There were many activities and creativities made by women of fishermen household in order to meet economic need of their family. The study on types of economic activity based on the survey towards women of the traditional fishermen households were fishery processing product, fish traders, and workers.

To calculate the total income of the traditional fishermen household was used as a sample consisting of three components, among other things were contributed from the income of husband as fisherman or doing other jobs, the income of wife of the fisherman (women), and the income of their children. Average income of the traditional fisherman household around Rp. 2,250,277.- per month, from 3 (three) groups where women's works in traditional fishermen household, whose wife working as the processor of fishery products indicated her higher income was contributed for about Rp. 2.833,333.- per month, while the lowest income was made by the women working as fish trader was contributed for about Rp. 1,909,333.- per month.

Of the total income, the average contribution that was made by women was about Rp. 628.888 per month, or it can be said that women gave contribution for 27.33% of total household income. The largest contribution was given by the group of women working in processing fishery products for 33.82% of the total household income, and the contribution of women who worked as traders for 24.77%. The type of jobs women in order to survive of living one of which is selling domestic goods and services (Chant, S 1994 and Wasito *et al.*, 2011)

In addition to the above-mentioned contribution, there was also other contribution made by the children of the traditional fishermen for 4.23% on average. The income of the traditional fishermen household and the contribution of women were indicated in the Table 2 below.

Table 2. Role of women towards the contribution of income to traditional fishermen household (In Rupiah)

Profession	Women's income	Income of husband as fisherman and others	Income of Children	Total income of Household	Women's contribution on income to household (%)
Trader	458,333	1,418,333	50,000	1,909,333	24.77
Fish products processor	958,333	1,750,000	125,000	2,833,333	33.82
Worker/Labor	470,000	1,425,000	114,167	2,009,167	23.39
Total	1,886,666	4,593,333	289,167	6,750,833	---
Average	628,888	1,531,111	96,289	2,250,277	27.33
Percentage (%)	27.33	68.44	4.23	100	---

Source : Primary Data, 2012

Seeing from the income per-capita of the fishermen household represents as the total income is divided by the total number of family member, then the fishermen household whose wife working as fish trader receives income lower than the other profession for about Rp. 369,000.- per-capita / month, while the highest income is received by the household whose wife working in the fish products processor for about Rp. 640.000 per-capita / month. When such figures is compared to the decent standard of living as stipulated by World Health Organization (WHO) shall be US \$ 2.00 per capita / day or more approximately Rp. 600,000.- per-capita per-month, so the group of the household that are above 2 \$ per capita / day is the traditional fishermen whose wife working in the fish products processor, while the other profession is under the standard of living.

Compared with the result of study by Zein in 2000 showed the contribution on women's income increased for 16%. This indicated that the role of women in productive roles have been increase since 12 years ago. This condition also indicated that gender's role in coastal areas becomes equal to men, where women have so long been supposed to serve a productive role only but they have nowadays been able to perform various economic activities as well as to back up their economic family in a particular situation (for example in low season). Elizabeth (2007), declare the various possibilities indicated that women and men can participate as equal breadwinners in many fields, as well as household activities, and socializing in the community. Declining fish catch was assured to be other causes, so that the money earned less to bring home in line with the depletion of fishery resources in the fishing zone of the areas. Elson (1988) in Lakshmi (2005), declare the factor that women working, while the men's work is not stabilize economy condition.

This result is parallel with the results of study by Aghazadesh (1994) in Bangladesh, that processing, small scale retail trade of fish and as reported that women very active in artisanal



fishing industry, i.e. fish processing and selling of fish. And at Tamil Nadu (India) Anbarasan (1985) has reported about 26% of the fisher-women are involved in marketing and handling of fish.

This phenomenon gives signal to all parties concerned that fishing activities has begun to undergone degradation by the traditional fishermen fishing in the ocean along the coastal waters. For this reason, alternatives of economic activities should be created and further developed in order to encourage the traditional fishermen in the areas to earn a living not only by fishing at sea.

Working time allocation

As previously disclosed that women of their daily life are required to perform their dual role, both their nature as women plays the role of reproductive. In a certain time or in poor economic situation, women are encouraged to perform their economic activities actively. In carrying out their role of productive as well as their role as reproductive need time to be allocated to perform those roles as described in the Table 3 below.

Table 3. Working Time allocation for women in performing the roles of production and reproductive (hours per month)

Profession	Productive Role	Reproductive Role
Traders	153.2	198
Fish Processor	106	210
Worker/Laborer	158.53	192
Total	418	600
Average	139.24	200

Source : Primary Data, 2012

Table 3 above shows the average working time allocation to be made available to perform production activities amounting 139.24 hours/months (by assuming 24 working days a month), except Sundays or about 5.8 hours a day. More over that groups of woman workers that must provide a great amount of time to earn a living as their economic role for about 158.53 hours a month (or 6.38 hours a day). The highest numbers of working time allocation in productive role imply to the responsibility against the activity of reproductive (i.e: care of household, child and husband) will reduce.

GAP Analysis

In the management literature, GAP analysis is the comparison of actual performance with potential performance. GAP analysis can also be used to compare existing processes to processes performed elsewhere, such as those obtained by benchmarking (Wikipedia Encyclopedia, 2013). In other words, GAP analysis is a method used to determine the performance of an on-going system with the standard system. In order to measure the performance of women working as traders, fish products processors and workers also use GAP Analysis in this study.

The result of GAP Analysis against the-3 professions indicate that the average age of women moves around the span of working age being under 55 years old with the level of education can be relatively said low at the average of 8.64 years. It is them working in the fish products processor education above 10 years (1st year of Senior High School) are competitive in the world of employment with minimum education 12 years or graduated from senior high school.

From the number of children point of view, these 3 groups were generally below the standard with having 2 children only following the government family planning program to have only 2 children in the family. According to working time allocation indicator, groups of women working in the fish products processor were below standard of the span of working time, while the groups of women working as trader or workers can generally work much longer.

From income per-capita point of view, it was groups of women working in the fish products processor were above the standard for earning of US \$ 2 per-capita / day or Rp. 600,000.- per-capita /day following the standard stipulated by World Health Organization (WHO), while other professions were below the standard. Table 4 and Figure 1 below describes GAP analysis from different variables or indicators of women living in the coastal lines of the areas.

Table 4 . GAP Analysis from different indicator of women living in the coastal region

Profession	Age (year)	Education level (year)	Number of Children (people)	Time allocation for works, hours/month	Income/capita (\$/month)
			3.17	153.2	36
			2.4	106	64



Worker/Laborer	41.9	8.8	2.4	158.5	45
Standard	55	12	2	120	60

Source : Primary Data, 2012

According to Table 4 above, it can be said that the group had approached the women as fish products processors in a variety of ideal standard in many regulation, and particularly for indicator of income per capita has reached above the standard, while the other two groups is below the standard.

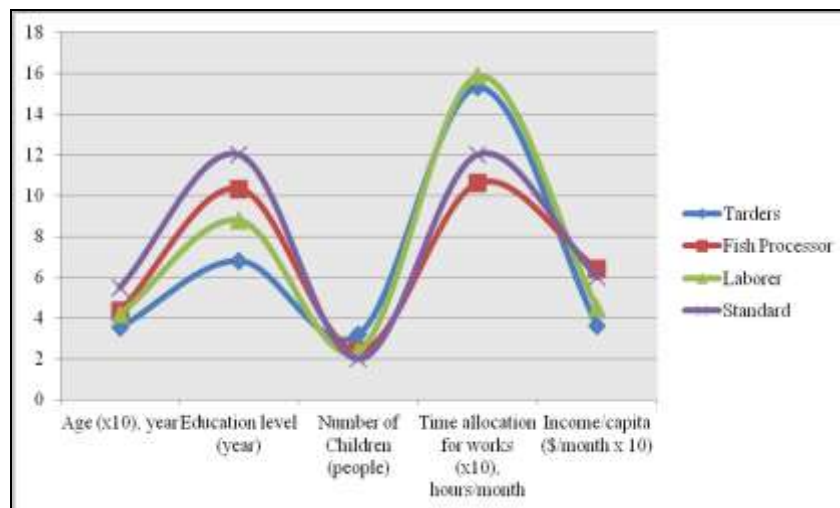


Figure 1 : GAP Analysis of women's work from different indicator

Factors that influences household income

Based on analysis on women income as described in the sub chapter above shows that women can give contribution of income (sharing) 27.33%. Largest contribution was given by groups of women working in the fish products processor and smallest share was given by group of women who works as laborers.

Multiple regression analysis was used to see the factors that affects on woman's income. By using 4 (four) kinds of variables, namely women's age, level of education, numbers of family member, and working time allocation by women. Results of the regression analysis are presented in

Appendix.

Based on the results of the above-mentioned analysis can be seen the variables that effects on women's income highly significant to women income was education level and working time allocation. This can be interpreted, the higher education level of women the more opportunities women to increase their income for 0,597 % . Elaine, E (2003) describes that the strategies of women for emergencies which at risk condition, especially to fulfill the basic necessity, so necessary balancing between science, skills and resources that they need. Therefore increasing the educational attainment of women can reduce the number of traditional women, rising wage levels and productivity, so as to transform the economy condition (Schulz, 1999)

On the contrary, the variable of working time allocation by women reflects negative effect of which means women may not necessarily work to get additional income because of the longer women work will indicate index of income will decline. This phenomenon signalizes that women can't be entirely away from their nature as housewives and they must be required to perform their reproductive role, that is to take care of their husband, children and household activities.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Conclusion can be made based on the results of above analysis as follows: In performing production roles of women can participate in giving contribution to the welfare of the traditional fishermen household for 27.33% of their total household income. Women generally spent 5.80 ng their economic activities. Based on GAP fish products processor indicates the outcomes

closed to the standard analysis, especially indicator income per-capita of women of which have been over the standard, while women whose profession as traders and workers were still below the standard. There were 2 factors found effecting dominantly on income of women in performing their production activities, namely education level and working time allocation.

Recommendations

To increase the household economic activities of the traditional fisheries in the coastal areas, endorsement from the government and private sectors in terms of employment and other business opportunities are very important, both fishery sector and other sectors.

REFERENCES

- Aghazadeh, E., 1994. Fisheries socio-economic analysis and policy. Assistance to the Fisheries Study Institute. Bangladesh. Technical Report. BGD/89/D 12
- Agus, 2002. Produktifitas wanita terhadap daya tahan ekonomi rumah tangga nelayan di Kabupaten Deli Serdang. Pasca Sarjana Universitas Utara, Medan.
- Anbarasan, K., 1985. Factors that influence the role and status of fisher-women. Report from the Bay of Bengal Project. FAO. Madras. India. 75pp.
- Chant, S., 1994. The international handbook of gender and poverty. Concept, Study, Policy. Brighton
- Elaine, E. 2003. Working with women at risk. Practical guidelines for assessing local disaster risk. International Hurricane Center. Florida International University.
- Elizabeth, R. 2007. Pemberdayaan wanita mendukung strategi gender mainstreaming dalam kebijakan pertanian di pedesaan. Forum Penelitian Agroekonomi. Volume 25 No. 2, Desember 2007 : 126 - 135
- Eviota, E.U., 1993. The political economy of gender, women and the sexual division of labor in the Philippines. London
- IFAD, 2002. Assesment of rural poverty. Asia and the Pacific, IFAD. Rome
- IFAD, 2011. New realities, new challenges: mew opportunities for tomorrows generation. Rural Poverty. Report 2011
- Laksmi, L 2005. Structural adjustment, gender and household survival strategies : Review of evidences and concerns. Center for education of women. The University of Michigan. <http://www.cew.umich.edu>
- Marine and Fishreies Servive West Sumatra, 2012. Buku Kelautan dan Perikanan Sumatra Barat. Padang
- Schulz, T.P., 1999. Women's role in the agricultural household. Bargaining and human capital. Economic Growth Center. Yale University.
- Todaro, M.P. 2007. Pembangunan ekonomi di dunia ketiga. Penerbit Erlangga. Jakarta.
- Wasito, U. Sumarwan, E.E. Ananto, E. Sunarti, and A.H. Dharmawan, 2011. Model nafkah dan pemenuhan kebutuhan pangan keluarga petani miskin di hutan jati (Kasus : Enam desa di Kabupaten Blora). Jurnal Penelitian Hutan Tanaman. Vol.8, No.2, April 2011, 59-80. Bogor
- Wikipedia Encyclopedia, 2013. http://www.en.wikipedia.org/wiki/Gap_analysis.
- Williams, 1995. From women inn fisheries to gender and fisheries. The Asia Fisheries Society and ICLARM-World Fish Center.
- Zein, A. 2000. The influence of technological change on income and social structure in artisanal fisheries in Padang, Indonesia. Bung Hatta University Press. Padang, Indonesia.
- Zein, A. 2011. Wanita nelayan dan ketahanan pangan rumah tangga. Bung Hatta University Press. Padang.



Appendix : Result of Regression Analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	486298.785	254062.664		1.914	.059
	X1	774.208	3781.504	.016	.205	.838
	X2	68455.543	9091.176	.597	7.530	.000
	X3	13222.332	23974.291	.043	.552	.583
	X4	-3891.423	814.934	-.371	-4.775	.000

a. Dependent Variable: Y

Remark

Y = Women's Income

X1 = Women's Age

X2 = Formal Education

X3 = Number of Family members

X4 = Working Time Allocation by Women

