JSPS - DGHE Core University Program in
Applied Biosciences

Proceedings of the 1st Seminar

Toward Harmonization between Development and Environmental Conservation in Biological Production

February 21-23, 2001

Yayoi Auditorium
Graduate School of Agricultural and Life Sciences
The University of Tokyo, JAPAN

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Contents

Preface

Three years have passed since we started the JSPS-DGHE core university project on applied biosciences, aiming to realize the harmonization between development and environmental conservation in biological production in densely populated rural Indonesia. Establishing sustainable agricultural production system is one of the most important issues in the 21st Century, particularly in developing countries. Graduate School of Agricultural and Life Sciences, the University of Tokyo and Bogor Agricultural University have been actively involved in this research project in rural Indonesia with the cooperation of other universities in both countries.

The purpose of the present seminar is to trace back the progress of our three years activities and to ensure the benchmarks for our self-evaluation. This opportunity will provide us not only to exchange the ideas based on the results of individual researches by four groups, but also to search the possibility of integrating academic results to draw the methodological framework toward the challenge for sustainability in biological production. It is extremely important to encourage the junior stuff members of the core and corresponding universities through this project. Therefore, this seminar is expected to give them a chance to accept reviews by the senior staff members. We are also inviting some researchers from other Asian countries, who will give us the valuable comments on our research project.

We do hope that the discussion throughout seminar is fruitful and is useful for further researches. In the past three years, we have focused mainly on the basic topics; selection of research topics and study sites, design of methodology, field research activities and laboratory analysis. Now we are willing to move on to the next stage; integration and implementation by applying the results we could obtain throughout our past experiences. It is desired that the results of our project will produce plenty of academic achievements. However, we should never forget that final goal of our project is to realize the harmonization between agricultural development and environmental conservation in rural Indonesia in the near future.

January 29, 2001

Dr. Yoshihiro Hayashi and Dr. Kazuhiko Takeuchi
Coordinator and Sub-coordinator of Japanese side

GENDER, POVERTY AND PEASANT HOUSEHOLD SURVIVAL STRATEGIES A CASE STUDY IN DRY LAND VILLAGE IN WEST JAVA

By :
Siti Sugiah M.MUGNIESYAH * and Kosuke MIZUNO **

ABSTRACT

This objectives of the study are to learn about the gender relation on the peasant household economies, access and control of the members to resources which were related to the agricultural activities and poverty alleviation programs; and those relation to the peasant household survival strategies which are developed by the peasant households members in their daily life and in facing the economic crisis. Based on the study that was conducted in Kemang Village, a remote dry land village in District Cianjur, West Java in the period of 1998 to 2000 it was found that men and women had access and control to land (rice field or *sawah* and dry land or *pasir*) through inheritance, buying and or sharecropping systems. Their access to land facilitated them to work hard on rice production which is important for survival. It was found that the higher the stratum the higher the access of men and women to land and education. Besides, the higher the access of women to land the higher the control to the rice production, in *sawah* and *pasir*. Due to the lack of gender awareness among the project executor and the village apparatus, most of the women did not access to project stimulants, group activities, training, agricultural extension that were introduced under the New Order Regim (i.e. IDT's and Social Forestry programs). In terms of the economic crisis, though at the beginning men and women were slightly excluded from rural employment, most of the poor household succeded to survive, partly because of access to loote the National Forest. Men' and women's contribution on farm and non-farm activities led to the differentiation of the strategy that were taken by peasant households. The accumulative strategy was developed by Stratum A , the consolidation strategy developed by Startum B, whereas the stratum C and mainly the Stratum D developed the survival strategy. Since the lower the stratum the higher the workload of women on conducting the productive and reproductive roles, the poverty feminization tend to exist among the lower stratum. All the facts finding supported to the premise that gender relation is critical to the peasant household survival strategies, as well as to poverty of women and poverty alleviation programs. Therefore, the gender mainstreaming and participatory approaches should be integrated in the sustainable agricultural/rural development program.

INTRODUCTION

The Background

Many studies on poverty and its alleviation in agricultural and rural community had been conducted in Indonesia. On the other hand, the study on gender in rural areas were also conducted by many researchers. But, most of those studies have not yet integrated the two, that is the study on poverty with gender perspective.

It is known that the family as the smallest unit in the community consists of men and women which interact with each other based on gender relation. Although it is assumed that men are the head of the family, in fact the income generating activities among peasant household are not always men's responsibility. On the other hand, the family welfare does not always reflect the women welfare. Thus, the gender relation in the household level is an important factor to the poverty of women and to the poverty alleviation . It means, the study which uses the gender analysis to a widerange of programmes and activities is therefore critical not only to the poverty allevition strategies but also to the poverty of women.

This study focuses on gender relation dynamics and the strategy which were developed by the dry land peasant households member to meet their household economic needs, and to identifies the factors in the community and the village government levels which influence their strategies in alleviating their poverty.

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Research Objectives

The objectives of the study are the following :

(1) To identify the profile of the village and gender among peasant households.
(2) To study about the gender relation on the various household economies among the dry land peasant household
(3) To find out the access and control of men and women to various resources, such as education, intitutional/group activities, training, extension and others, and to study about the relationship of women' and men's access to land and their control on agricultural production activities .
(4) To study the implementation of the poverty alleviation programmes which were introduced by the government and the impact of economic crisis on gender relation in the family and community levels.
(5) To study gender relation and the peasant economic household strategies toward the dry land and environment sustainability .

METHODOLOGY

By using the gender analysis techniques, gender relation in various levels (houesehold, community and institutions) can be studied through 4 aspects, that is (a) activity profile or time allocation on various roles, (b) access and control to various resources, (land, education, extension, training) (c) benefit analysis and (d) factors which influence gender relation in various levels (Poats and Feldstein, 1989; Moser, 1986).

The BPS's poverty line criteria for food and non-food expenditure per capita were used to analysize the peasants household's poverty level. According to the BPS's , the property line for rural areas in West Java was Rp. 72 355; per capita (1998) and Rp. 73,855,- per capita (1999). The analysis on peasant household strategies used the White's concepts on multiple occupation (agriculture and non-agriculture), which differentiate the strategies into : (a) the accumulative; that is the strategy which is taken by the peasants (men and women) who own large size of land and control on agricultural product surplus above their life need; and who spend their non-agricultural output on reinvesting in the agricultural sector; (b) the consolidation, that is the peasants who own medium size of land and enter the non-agricultural sector for the sake of risk security and/or for the completion the seasonal non-agricultural income as the sustainable income source; and (c) the survival, which has been developed by the peasants who own very small size of land or who are landless and they have to allocate their household labor on the non-agricultural sectors for survival strategy, because `their income from farm production and laborers is not enough to cover their basic needs, (White,1990).

By referring to the objectives of the study, we selected Kemang Village, a remote dry land village in Bojong Picung sub-district, Cianjur District, West Java. The research was conducted during the period of October 1998 to December 2000 and the methods used in collecting the data were small census, survey, observation and focused group discussion and in depth interview. Since the peasant household is not homogenous, the small census was conducted in two hamlets, Beber and Kemang (170 households), especially to determine the criteria on the socio-economic stratification and to identify the peasant household profile as well. Based on the criteria of land holding, the occupation of the peasant household member and housing condition, the peasant household is differentiated into 4 categories, the Stratum A (the upper stratum), Stratum B (the middle stratum), Stratum C (the lower stratum) and Stratum D (the lowest stratum). Due to the differences on land cultivation frequency, in rice field and dry land, the number of the household samples in each year survey was different. There were 70 household samples in 1998, and 66 household samples, each in 1999 and 2000. The data were analyzed by using the correlation coefficient of Rank Spearman and the gender analysis descriptively.

RESULT

The Profile of the Village and Peasant Household

Similar to the other dry land villages, the Kemang Village is a mountaneous area which has limited flat land. Therefore, the majority of the total village areas (2 393.4 hectares) consists of slopping dry land, 43.5 percent belonging to the National Forest Land (the Perum Perhutani) and 36 percent belonging to the village people, and only 3 percent the rice field (sawah) only of the total areas.

In 1998, there were 4 411 people which belong to the 1 378 households and in 2000 there was a slightly

decrease in the number of people, that was became 4 333 people. By sex, the number of women is slightly lower than that of men that was 49. 6 percent for women in 1998 and in 2000 there was 49,3 percent. Out of the total households there were 87 households in the *Pra-Keluarga Sejahtera* (Pre-welfare family) category and 546 in the Keluarga Sejahtera I or poor family (Village Monograph, 2000).

The result of the small census shows that out of 170 households there was 38.2 per cent of landless household (not own rice field nor dry land), 16.5 percent of those did not own rice fiield but own dry land ; and 9.4 percent of those own rice field but not dry land. It means only 35.9 percent who own rice field as well as dry land. Since rice field in the village is limited, the average size of rice field per household is lower than the dry land. The average size of rice field per household is 590 m^2 and 3620 m^2 for the dry land. According to the ownership, the average size of the rice field belonging to the wife is slightly higher than that of husband's land and in the *gono gini* category (owned by husband and wife). But, for the dry land , the highest average size belongs to the *gono gini*, that is around 1380 m^2 , whereas that which belong to husband and wive, that is 1340 m^2 and 910 m^2 , respectively. By socio-economic stratification, it is found that the majority of the households belongs to the Stratum C (38 percent). The next belong to Stratum D (28 percent), then followed by the Stratum B and A, that is 24 percent and 11 percent respectively.

Gender and Agricultural and Non-agricultural Activities.

Work on the rice field and the dry land are done by men and women, within and outside household (Table 1). In terms of the within household labor, compared to the men, women contribute only around 86 percent and 78 percent, each for rice field in rainy and dry seasons and 85 percent in huma paddy. Conversely, the women outside household are absorbed higher than of men, except for the huma paddy. Since the planting period for the huma is longer than the rice field, the women and men contribution to huma paddy production process was higher than that to the rice field. By stratum, there is a tendency that the lower the stratum the higher the men and women within household on farm activities, which is contrary to outside household labor and it results in the higher the stratum the higher the total wage. The statistical test supported the result (Appendix 1. $\alpha = 0.1$).

Men and women were also engaged in non-agricultural productive activities, especially in trade, brown sugar industry and services. In term of brown sugar industry, there is a sharp divison of labor among the couple, men usually engaged on pre-processing as a tapper, meanwhile women in post-harvest (cooking, packaging and selling). Most of the tapper belong to the Stratum B and C.

Table 1. The Average Annual Working Hour of Within and Outside Household Labor by Stratum and Sex (1998-2000)

Strata	Sex	Rainy Season		Dry Season		Dry Land	
		WHL	OHL	WHL	OHL	WHL	OHL
A	M	326	227	295	250	506	262
	F	398	458	227	518	388	162
B	M	549	162	476	179	632	182
	F	427	460	355	505	472	110
C	M	760	729	725	211	825	811
	F	473	419	422	465	563	182
D	M	682	68	931	114	1149	126
	F	852	84	1175	120	1167	99
Total (%)	M	580	329	551	200	776	399
	F	500	389	430	455	664	142
Total hour	M	32	18	34	12	39	20
	F	28	22	26	28	34	7

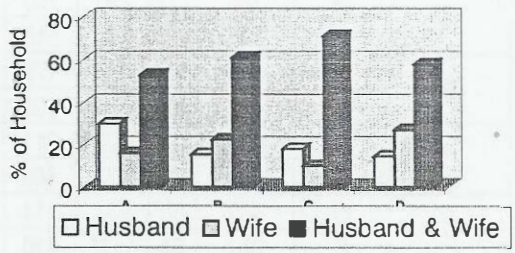
M= Male; F = Female

Access and Control to Various Resources and Rural Development Programs.

Although in general the majority of men and women in the peasant household are low in education level and the percentage of women in higher education is lower than that of men, the tendency is that the higher the stratum the higher their access to education level (r_s = .260 for women and r_s =.229 for men ; $\alpha = 0.1$) . In term of institutional activities, it is found that women have more access to informal group activities than men, meanwhile men more access to the formal one. Based on the data in 1999, there was a significant correlation between the strata and the men activities in various development programmes (rs = . 417;α = 0.1), but not for the women. In term of control to agricultural production activities, it is found that the decision making pattern
which is dominant is the husband and wife pattern (Figure 1).

The statistical test of the data in 1998 showed that the higher the access of women (wife) to land the higher the control to rice production (r_s = .273), except for the huma paddy. It can happen because in all stratum, men and women have access to dry land, although the way of access to dry land is different. The difference is that women and men in upper stratum have access to dry land through ownership; meanwhile in the lower stratum they have access by looting the National Forest Land .

Figure 1. The Percentage of Household based on the Decision Making Pattern on Rice Field Activites and Strata



In the period of 1994-1996 the Kemang village accepted the Presidential Instruction Program for Less Developed Village or Program IDT (Inpres Desa Tertinggal), a poverty alleviation program . Various stimulants – goat, sheep as well as small capital for rice field sharecropping-- were introduced to the village people, but most of the stimulant was allocated to the men as the head of the household. With the IDT's status, the village people also accepted the Social Forestry and the Integrated Community Forest Village (PMDHT) programmes. There were 3 stages of Social Forestry, that was in 1988, 1991 and 1992 , respectively which covered 25 Ha , 54 Ha and 19 ha of National Forest Land in Cingoyar and Arca Blocks. Based on the number of household, there was 72 , 128 and 23 male head households, respectively in that period. Although, each household should have received 0.25 ha, it was found that some of the upper stratum who lead the Forest Farmer Group had access to 1 hectare. Various training and extension were also introduced through PMDHT programs, including the training on food processing; but none of the women were involved on such activities. It means there was a gender inequity on stimulant distribution.

Gender and Household Income Contribution

Dry land plays an impotant role in the peasant economic household. It is seen on Table 2 , the dry land contribution on household income is significant,especially for lower stratum Since the time allocation of women within household in almost every stratum on dry land was significant, it means that women also play an important role in the income of the peasant household. There was a tendency that the higher the stratum the higher the contibution to the total income. Except for 1999, the statistical test supported the tendencies, that is rs = .547 in 1998 and rs= . 385 in 2000.

Besides, women of lower stratum also play an important role in the non-farm productive activities, especially in trade, brown sugar industry, service and non-farm labor.

Table 2. The Percentage of Source of Income by Stratum, Type of Farming and Year.

Year	Strata	Rice Field	Dry Land	Total (Rp)
1998	A	68,7	31,3	7 876 647
	B	64,7	35,3	1 628 716
	C	74,9	25,1	1 439 766
	D	77,9	22,1	663 067
1999	A	62,9	37,1	5 806 501
	B	59,6	40,4	1 966 015
	C	37,1	62,9	1 543 948
	D	34,7	65,3	689 400
2000	A	44,8	55,2	12 649 375
	B	57,8	42,2	2 609 862
	C	55,1	44,9	2 323 953
	D	23,0	77,0	988 803

The statistical test on the data of 1998 to 2000 shows that men and women contribute to the non-farm income, except for the wife in 1999 and in 1998 (Table 3). The non significant of women contribution at that time was due to the decrease on trade capital and employment opportunity because of the crisis.

Table 3. Spearman's Coefficient for Correlation between Statification and Non Farm Income by Period and Year.

Period and Status	1998	1999	2000
A. Last Month Income			
1. Husband	.211*	.226*	.461**
2. Wife	-.028	.229*	.282*
B. Last Year Income			

1. Husband	.202*	.327**	.346**
2. Wife	.055	.115	.240*

In terms of farm labor, through *the bawon system* (a patron-client system between the women's of the land owner and the labor in harvesting) the contribution of women on bawon is significant too (Table 4). .

Table 4. Spearman's Coefficient for Correlation Between Stratification and "Bawon" on Paddy Field and Huma, by Season and Year.

Kind of Rice	1998	1999	2000
o. Rainy Season	.407**	.407**	.457**
o. Dry Season	.618**	.482**	.349**
Paddy Huma	-.293	-.043	.037

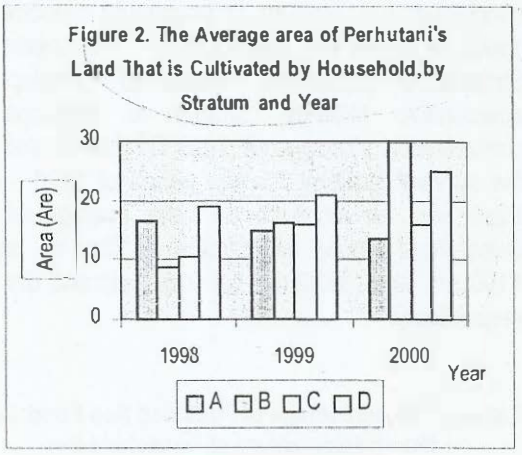
The study was also found that some women of Stratum B and C worked as migrant workers to contribute the income household, especially tha data in 1998.

The Impact of Economic Crisis On Gender in Various Aspects

When the economic crisis happened since July 1997, the peasant household economic condition became worst. But, since most of the peasant household wanted to make the rice field production more efficient, they tended to decrease the number of labor, so the employment opportunity for men and women were also decreased. Since all the food commodities price rose significantly, and the rice production was bad due the drought season, the crisis caused the increase of men and women access to the National Forest Land . Almost all the Kemang people looted the National Forest land. Along with the political reform in the national level, during the period of 1998 to 2000 there was a slight increase on the National Forest Land looting, except for Stratum A (Figure 2).

Statistical test shows the tendency that the lower the stratum the wider the National Forest land looted by peasant household , the rs =.-253 in 1998; and for 1999 and 2000 is rs= .-277 and rs= .-230, respectively).

In terms of labor wage, along with the time line, the worst negative impact of the crisis no longer existed; although there was a deliberate difference between men and women. As seen on Table 5, there is a significant increase on labor wage for men as well as women.



The political reform on eradication of corruption, collusion, and nepotism did not affect the distribution of the "crisis package ", such as *Beras OPSUS* (Special Operation Rice) as well as the Social Safety Net (SSN) program. Although the gender perpective considered SSN, especially on the PMDKE program, the number of women who had access on that program was lower than that of men. Due to not having a good procedure and the fact that earlier the people know the faster they get the package; the Beras OPSUS distribution was also not equal to gender.

Tabel 5. Labor Wage (Rp) and Value of Rice Equivalent (litre)

Item	Before Crisis		During Crisis					
	1997		1998		1999		2000	
	Rp	Rice	Rp	Rice	Rp	Rice	Rp	Rice
Female : o. With Meal	3000	3	4000	1,6	5000	2,5	6000	3,4
o. Meal Cost	1500	1,5	3000	1,2	1500	0,8	2500	1,4
o.Without Meal	"Never"		5000	2	6000	3	7000	3,9
Male: o. With Meal	3500	3,5	5000	2	6000	3	7000	3,9
o. Meal Cost	3000	3	5000	2	1500	0,8	2500	1,4
o.Without Meal	"Never"		5000	2	7000	3,5	8000	4,4

*) Equivalent to volume of Rice (litre)

Gender Relation and Peasant Household Survival Strategies

Based on the description above, there is a significant contribution of women as well as men in the household economy . But, the strategy that was developed by the household was related to the sosio-economic stratification. Based on the food and

non food expenditure (Table 6) and compared to the Poverty Line criteria for West Java (Table 7) , it is concluded that Stratum D household income per capita is under the poverty line. It seems that Stratum A household tends to develop the acumulative strategy, Stratum B develops the consolidation strategy, whereas Stratum C and D in the survival strategy. In the period of 1998 – 2000 there was an increase on the average of land ownerships among the Stratum A, that is around 1100 m^2 and 3799 m^2 for rice field and dry land, respectively.

Table 6. The percentage of Food and Non Food Last Month Expenditure of Household By Stratum, 2000.

Kinds of Expenditure	Strata			
	A (n=15)	B (n=20)	C (n=19)	D (n=12)
1. Food (%)	51	61	69	63
2. Non Food (%)	49	39	31	27
Total (Rp)	868 332	433 676	312 570	275 534

Table 7. The Average of Income per Capita by Stratum.

Item	Stratum A	Stratum B	Stratum C	Stratum D
Income per Capita (Rp)	173.666	108.419	104.190	68 884

Note: The Criteria of Poverty Line in Village ofWest Java Province in 1999 is Rp. 73 885.

CONCLUSION

The study supported the premise that men and women play an important role in the dry land peasant household economy , in farm as well as non-farm activities; and also supported the premise that gender relation in the household level and the socio-economic household characteristics determine the choice of strategy taken by the dry land peasant household members in employment and income earning activities. Furthermore, since women still play the main task in the domestic activities, the study also found that women suffered more from workload. It seems also to strengthen the poverty feminization, especially among the lower stratum.

There is a dilemma concerning the interaction between the people and the Perum Perhutani. On one side, the crisis that leds to the changes on power relation between the people and the Perum had accelarated the access and control of people, men and women to land which means also supported the household food security . But, on the other side the lack of control and agricultural extension, in the long term will tréathen the sustainability of forest land.

Besides, the lack of empathy and gender consciousness among the village government people and other local leaders in the poverty alleviation package distribution, mean that the democratization and the gender awareness extension should be introduced to them. And this efforts should be followed by the cooperative inquiry on the implementation of the integrated rural development program which is based on the participatory and gender mainstreaming that will accelarate the empowerment of men and women to achieve the gender practical and strategical needs.

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Appendix 1. Spearman's Coefficient For Correlation Between Stratification and Time Allocation and Wage On Rice Field and Dry Land (Huma Paddy) By Status of Labor , Sex and Year

Status of Labor, Sex and Wage	1998			1999			2000		
	Rice Field		Paddy Huma	Rice Field		Paddy Huma	Rice Field		Paddy Huma
	Rainy Season	Dry Season		Rainy Season	Dry Season		Rainy Season	Dry Season	
Within Household Labor									
Male	-.347**	-.306*	-.088	-.467**	-.467**	-.169	.199	-.307*	-.295**
Female	-.325**	-.237*	.016	.133	-.454**	-.189	.111	-.454**	-.318**
Outside Household Labor									
Male	.205*	.239*	.522**	-.005	-.083	.070	.395**	.333*	.097
Female	.219*	.197	.468*	-.509**	.160	.010	.451**	.387**	.137
Total Wage									
Male	.248*	.194	.567**	-.026	-.012	.083	.452**	.277*	.074
Female	.237*	.155	.407**	.066	.178	-.007	.452**	.438**	.006