

# The Effect of Participatory Rural Appraisal (Pra) in Bccpgle Activities on the Community Welfare in Batu Itam Village, Aceh Selatan Regency, Nanggroe Aceh Darussalam Province

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**Abstract.** The participatory rural appraisal method is carried out as an effort to develop areas and improve human resources and community welfare. The purpose of this study was to determine the effect of village transect, seasonal calendar, division of labour between men and women, livelihood, and institutional relation partially and simultaneously on the community welfare. The study was conducted in Batu Itam Village on the effect of participatory rural appraisal on the community welfare. The analytical methods employed descriptive analysis and multiple regression analysis. The results showed that the village transect, seasonal calendar, labor division between men and women, and livelihood had a positive and significant effect on the community welfare. Institutional relation had no significant effect on the community welfare. Village transect, seasonal calendar, labor division between men and women, livelihood, and institutional relation simultaneously had a significant effect on the community welfare in Batu Itam Village, South Aceh Regency.

Keyword: Participatory Rural Appraisal, Community Welfare, Area Development

**Abstrak.** Metode partisipatory rural appraisal dilakukan dalam upaya pengembangan wilayah dan peningkatan sumber daya manusia serta kesejahteraan masyarakat. Tujuan dalam penelitian ini adalah untuk mengetahui pengaruh transek desa, kalender musim, pembagian kerja laki-laki dan perempuan, mata pencaharian, hubungan kelembagaan secara parsial dan simultan terhadap kesejahteraan masyarakat. Penelitian dilakukan di Desa Batu Itam tentang pengaruh partisipatory rural appraisal terhadap kesejahteraan masyarakat. Metode analisis yang digunakan adalah analisis deskriptif dan analisis regresi berganda. Hasil penelitian diperoleh bahwa transek desa, kalender musim, pembagian kerja laki-laki dan perempuan, dan mata pencaharian berpengaruh positif dan signifikan terhadap kesejahteraan masyarakat. Hubungan kelembagaan tidak berpengaruh signifikan terhadap kesejahteraan masyarakat. Transek desa, kalender musim, pembagian kerja laki-laki dan perempuan, mata pencaharian dan hubungan kelembagaan secara simultan berpengaruh signifikan terhadap kesejahteraan masyarakat di Desa Batu Itam Kabupaten Aceh Selatan

**Kata Kunci:** Partisipatory Rural Appraisal, Kesejahteraan Masyarakat, Pengembangan Wilayah

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## **1. Introduction**

Batu Itam Village is a village in Tapaktuan District, South Aceh Regency which has natural potential that can be developed in the form of various types of plantation and agricultural crops as well as the development of Non-Timber Forest Products (NTFPs) which have a large number, and growth and development suitability in this village area, which have economic income of the community. In the process of the journey of Batu Itam Village in managing natural resources, it still seems that they have not paid attention to the provisions of sustainable management and use and the inability of human resources related to the management and utilization of these resources. Biodiversity Conservation and Climate Protection in the Gunung Leuser Ecosystem (BCCPGLE)/BioClimateLeuser Program is a grant collaboration program between the Federal Government of the Republic of Germany and the Government of the Republic of Indonesia through the Ministry of Environment and Forestry as Executing Agencies and The Aceh Forestry Service as Implementing Agencies, is expected to improve the welfare of the people in Batu Itam Village through community assistance.

One form of activity to support the implementation and evaluation monitoring, the BCCPGLE program develops PRA approach or participatory village study, which is an approach and method that allows the community to jointly analyse life problems in order to formulate real plans and policies. PRA is a group of approaches or methods that enable village communities to share, improve, and analyse their knowledge of village conditions and life and make concrete plans and actions [2].

The stages in PRA include: village transects, seasonal calendars, division of labour for men and women, livelihoods, and institutional relationships. Besides, the PRA method can be used as an effort to prepare village development plans and increase human resources in rural areas. Participatory planning is a plan that involves the community as a whole since ideas processes, and decisions come from the community, but in the process, it needs assistance to encourage increased awareness and motivation to be actively involved in all planning processes. PRA is very much in line with what is mandated in Village Law Number 6 of 2014 concerning Village Governments to assess village potential.

The use of abbreviation is permitted, but the abbreviation must be written in full and complete when it is mentioned for the first time and it should be written between parentheses. Terms/foreign words or regional words should be written in italics. Notations should be brief and clear and written according to the standardized writing style. Symbols/signs should be clear and distinguishable, such as the use of number 1 and letter l (also number 0 and letter O).

This study aimed to determine the effect of Participatory Rural Appraisal (village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation) on Community Welfare in Batu Itam Village, Aceh District, South Nanggroe Aceh Darussalam Province.

## **2. Methodology**

This study used a quantitative approach with multiple regression analysis methods:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e \quad (1)$$

Where :

Y : Community welfare (attitude, land use, and economy)

a : Constant

$b_1$  : Variable regression coefficient  $X_1$

$X_1$  : Village transect

$X_2$  : Seasonal calendar

$X_4$  : Livelihood

$X_5$  : Institutional relationship

The population and sample of this study were the Gapoktan Gunung Tinggi farmer group in Batu Itam Village with a total of 67 people (Based on the Decree of the Head of Batu Itam Village). Data was collected through field observation and questionnaire.

### 3. Results and Discussion

In general, the results of this research showed that village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation simultaneously had a significant effect on community welfare. The various test results carried out can be observed in the following table and explanation.

#### 3.1 Hypothesis Testing

##### a. Coefficient of Determination Test Result ( $R_2$ )

To find out the variables of community welfare that are influenced by village transect variable, seasonal calendar, labour division between men and women, livelihood, and institutional relationship can be seen through the coefficient of determination.

**Table 1** Coefficient of Determination Test Result ( $R_2$ )

Model	R	$R_2$	Adjusted $R_2$	Std. Error of The Estimate	Durbin-Watson
1	0.825 <sup>a</sup>	0.681	0.655	1.34910	1.563

a. Predictors : (Constant), Institutional\_relationship, Livelihood, Village\_Transect, Seasonal\_Calendar, Labour\_Division

b. Dependent Variable: Community Welfare

Source : Primary data processed, 2021

The calculation result of the R Square value is 0.681, this result means that 68.1 percent of community welfare can be explained by the five independent variables above (village transect, seasonal calendar, labour division for men and women, livelihood, and institutional relation), while the rest are 31.9 percent explained by other variables that are not included in this study, such as health level, community nutrition, and education level.

##### b. Simultaneous Test Results (F Test)

Simultaneous effect test is used to determine whether the independent variables simultaneously affect the independent variables.

**Table 1** Simultaneous Test Results (F Test)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	236.738	5	47.348	26.014	0.00 <sup>b</sup>
	Residual	111.024	61	1.82		
	Total	347.761	66			

a. Dependent Variable : Attitude\_landuse\_economy

b. Predictors: (Constant), Institutional\_relationship, Livelihood, Village\_Transect, Seasonal\_Calendar, Labour\_Division

Simultaneous statistical tests showed a probability level of 0.000. It can be concluded,  $P = 0.000 < \alpha = 0.05$ , which means  $H_a$  is accepted. This means that the independent variables of the village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation simultaneously have a significant effect on community welfare (attitude, land use, and economy).

### c. Partial Test Results (T - Test)

T-test is used to partially test each variable. The results of the t-test can be seen in the coefficients table in the sig (significance) column. If the probability of t value or significance  $< 0.05$ , it can be said that there is an influence between the independent variables on the dependent variable partially to test the partial regression coefficient individually from each independent variable.

**Table 2** Partial Test Results (T-Test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	0.168	1.918	0.195	0.087	0.931	0.722	1.385
	Village_transect	0.319	0.139	0.252	2.293	0.025	0.416	2.406
	Seasonal_calendar	0.389	0.173	0.210	2.250	0.028	0.676	1.479
	Labor_division	0.323	0.135	0.269	2.391	0.020	0.381	2.623
	Livelihood	0.400	0.174	0.146	2.299	0.025	0.693	1.443
	Institutional_relation	0.206	0.123		1.680	0.098		

a. Dependent Variable : Attitude\_landuse\_economy

Source : Primary data processed, 2021

- 1) Village transect variable ( $X_1$ ) with a probability level of 0.025. Thus, it can be concluded that  $P = 0.025 < \alpha = 0.05$ , then reject the  $H_0$  hypothesis and accept  $H_a$  which states that the village transect variable has a positive and significant effect on community welfare (attitude, land use, economy).
- 2) Seasonal calendar variable ( $X_2$ ) with a probability level of 0.028. Thus, it can be concluded that  $P = 0.028 < \alpha = 0.05$ , then reject the  $H_0$  hypothesis and accept  $H_a$  which states that the seasonal calendar variable has a positive and significant effect on community welfare (attitude, land use, economy).
- 3) Labour Division for men and women ( $X_3$ ) with a probability level of 0.020. Thus, it can be concluded that  $P = 0.020 < \alpha = 0.05$ , then reject the  $H_0$  hypothesis and accept  $H_a$  which

states that the labour division between men and women variable has a positive and significant impact on community welfare (attitude, land use, economy).

- 4) Livelihood variable ( $X_4$ ) with a probability level of 0.025. Thus, it can be concluded that  $P = 0.025 < \alpha = 0.05$ , then reject the  $H_0$  hypothesis and accept  $H_a$  which states that livelihood variable has a positive and significant impact on community welfare (attitude, land use, economy).
- 5) Institutional relationship variable ( $X_5$ ) with a probability level of 0.098. Thus, it can be concluded that  $P = 0.098 > \alpha = 0.05$ , then accept the  $H_0$  hypothesis and reject  $H_a$  which states that the institutional relationship variable has no significant effect on community welfare (attitude, land use, economy).

Based on Table 3 and the description above, it is possible to construct multiple regression equations as follows:

$$Y = 0.168 + 0.319 X_1 + 0.389 X_2 + 0.323 X_3 + 0.400 X_4 + 0.206 X_5 \quad (2)$$

Multiple regression equation model is as follows:

- 1) The constant value is 0.168 which means that if there is no independent variable value, in this case the village transect variable, seasonal calendar, labour division between male and female, livelihood, and institutional relations are equal to 0 (zero) then the value of community welfare (attitude, land use, and economy) by 0.168 percent.
- 2) Village transect variable ( $X_1$ ) = 0.319. The village transect variable with a positive sign means that it has a unidirectional effect, which means that each addition or increase in the log of the village transect variable will increase the value of community welfare (attitude, land use, and economy) by 0.319 percent.
- 3) Seasonal calendar variable ( $X_2$ ) = 0.389. The seasonal calendar variable with a positive sign means that it has a unidirectional effect, which means that each addition or increase in the log of the seasonal calendar variable will increase the value of community welfare (attitude, land use, and economy) by 0.389 percent.
- 4) Labour division between men and women variable ( $X_3$ ) = 0.323. The labour division between men and women variable with a positive sign means that it has a unidirectional effect, which means that each addition or increase in the log variable for labour division between men and women will increase the value of community welfare (attitude, land use and economy) by 0.323 percent.
- 5) Livelihood variable ( $X_4$ ) = 0.400. Livelihood variable with a positive sign mean that it has a unidirectional effect, which means that each addition or increase in the log of livelihood variable will add to the community welfare value (attitude, land use and economy) by 0.400 percent.

- 6) Institutional relationship variable ( $X_5$ ) = 0.206. The institutional relationship variable with a positive sign means that it has a unidirectional effect, which means that every addition or increase in the log of the institutional relationship variable will increase the value of community welfare (attitude, land use, and economy) by 0.206 percent.

### **The effect of village transects on community welfare (attitude, land use and economy) in Batu Itam Village**

The village transect variable has a positive and significant effect on community welfare (attitude, land use, and economy). The results of this study are in line with the research of Sanusi dan Hidayat [9] who concluded that the village transect can multiply the potential, problem, and problem solving in the village and make planning activities that can be carried out in a village to improve community welfare based on the potential that exists in the village.

In an effort to optimally utilize and sustain the natural resources for the community welfare, the government in the Strategic Plan of the Ministry of Forestry 2010 – 2014 made eight priority policies for forestry development, one of which is the empowerment of communities around the forest. In the community empowerment activities so far, there is lack of community involvement starting from the early stages of planning, so that the community empowerment is not relevant to community needs. Purnamasari in [8] suggests that basically the community can be actively involved from the early stages of planning. Community involvement can be in the form of: education through training, active participation in gathering information, participation in providing alternative plan and proposal to the government.

### **The effect of the seasonal calendar on community welfare (attitude, land use and economy) in Batu Itam Village**

The seasonal calendar variable has a positive and significant effect on community welfare (attitude, land use, and economy). The results of this study are in line with research by Dako dan Tamu in [3] who concluded that the existence of a seasonal calendar can provide an understanding of the life system and natural condition in the village. The seasonal calendar describes the pattern of community's lives every month such as rainfall, cropping pattern, land cultivation, harvesting, labour demand, plant disease, and food availability. The seasonal calendar is also useful for improving community welfare.

Recording of seasonal calendar based on community habit is an assessment of technical, social, economic, and other aspects of community activities/conditions that occur repeatedly within a certain period of time (seasonal). Thus, patterns of events or activities can be described in each season or every year, for example about cropping pattern, religious holiday agenda, food crisis, drought, pest attack, disease outbreaks, and so forth

### **The effect of the labour division between men and women on the community welfare (attitude, land use, and economy) in Batu Itam Village**

The variable of labour division between men and women has a positive and significant impact on community welfare (attitude, land use, and economy). The results of this study are in line

with the research of Hikmah, et al. in [5] who concluded that the existence of a labour division can provide an overview of the labour division pattern and the gender contribution for income as well as strategies for gender empowerment in order to improve welfare.

The labour division is necessary for survival, then it is started the labour division based on biological basis. Thus, there is a labour division based on sex. Furthermore, it emerges the different types of work outside (public) and work inside (domestic). Socialized by their environment, women tend to live in groups, and manage food and medicine. This is different from men who work outside freely.

Based on the results of PRA activities, the labour division between men and women is to see the role and involvement of men and women in each activity/business. For example, the division of easy work is carried out by women such as cutting, deviating money, and using money, while the heavy work is carried out by men such as clearing land, harvesting, and fertilizing.

#### **The influence of livelihood on community welfare (attitude, land use, and economy) in Batu Itam Village.**

Livelihood variable has a positive and significant impact on community welfare (attitude, land use, and economy). The results of this study are in line with the research of Prasetya, et al in [6] which concluded that the existence of a livelihood study is closely related to the economic aspect and changes in the economic aspect will also affect the social conditions of the community, so that the shift in agricultural land has an impact on the socio-economic conditions of the community and how to use the land.

In a community, decision making in choosing a livelihood or livelihood change occurs based on the influence of community values. It is also influenced by new desires that are formed from the new insight and experience and efforts to improve the situation.

Livelihood or work is the basic activity of any community for its survival, whether it is producing their own needs, or for exchange or trade with others. If a program considers that the livelihood aspect of the participants will be used as an entry point for community development goals, then a way is needed that is able to absorb the community's views on the development of their livelihood. This will form the basis for program planning development.

Based on the results of PRA activities, the agricultural sector has a dominant role in the community's economy in Batu Itam Village. The number of people who still depend on the agricultural sector, shows that the agricultural sector plays an important role in economic conditions.

#### **The influence of institutional relation on community welfare (attitude, land use, and economy) in Batu Itam Village.**

Institutional relationship variable has no significant effect on community welfare (attitude, land use, and economy). The results of this study are in line with research by Supriatna in [11] which proved that institutional relation have no significant effect on community welfare. One of the

important things to consider in community development efforts is the utilization of the potential of these institutions. Therefore, the existence and level of public acceptance of these institutions need to be taken into account in every community development effort. Venn diagram technique is a PRA technique that is often used to see the relationship between various institutions in the village, so this diagram is known as an institutional relationship chart.

The making of an institutional relationship chart is a PRA technique used to facilitate the study of the relationship between the community and the institutions in its environment. The results of the assessment are poured into a Venn diagram (a type of pie chart, adapted from the discipline of mathematics), which will show the magnitude of the benefits, influence, and close relationship of an institution with the community.

### **The effect of village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation on community welfare (attitudes, land use, and economy) in Batu Itam Village**

Variables of village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation have a positive and significant impact on community welfare (attitude, land use, and economy).

PRA in empowering the community to encourage social change through community development with a mutual learning approach. The existence of PRA activities in Batu Itam Village provides a very positive role for the community welfare. The results of the study indicate that the village transect, seasonal calendar, and labour division between men and women as well as livelihood has a positive and significant role in attitudes, land use, and economy, as it is known that PRA activities in Batu Itam Village affect the attitude of the community in accepting activities and direct community involvement in each activity. The attitude of the community in this regard is very accepting activities so that the program can be sustainable.

From the results of PRA activities, it also influences land use and the economy in Batu Itam Village. In this case, the community prioritizes the agricultural sector as one of the sectors that has the potential to be developed in a sustainable manner. The agricultural sector is a strategic sector and plays an important role in the community's economy and community survival.

Agriculture is the activity of utilizing biological resources by humans to produce food, industrial raw materials, or energy sources, as well as to manage their environment. The activities of utilizing biological resources which are included in agriculture are commonly understood by people as crop cultivation. The agricultural sector is a sector that has a strategic role in the economic development structure.

Effective and efficient natural resource management will affect village development and improve the economy of the community, especially in Batu Itam Village in the future. In accordance with research (Das, 2012) [4] states the concept of planning in community empowerment in accordance with community needs and the carrying capacity of the area as



well as the wise and sustainable management and utilization of natural resources can affect the community's economy. Thus, it is very important for the community to understand how to use land more productively.

From the results of the study, it was also found that institutional relationship has a role in attitudes, land use, and economy. Viewed from the institutional relationship chart that has been prepared, village government has an important role in the community to form a harmonious community. With the role of the village government, it is hoped that in the future it will have an impact on the community welfare directly with the applicable systems and regulations.

#### **4. Conclusions and Recommendations**

The conclusion of this study is that the village transect, seasonal calendar, labour division between men and women, and livelihood have a positive and significant effect on community welfare, while institutional relationship has no significant effect on community welfare. Village transect, seasonal calendar, labour division between men and women, livelihood, and institutional relation simultaneously have a significant effect on the community welfare in Batu Itam Village, South Aceh District, Nanggroe Aceh Darussalam Province. The suggestion in this study is in the process of sustainable village development, the PRA method is a very reliable method for community empowerment program and has a positive impact on community welfare.

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