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FARMER COMMUNITIES CONSERVATIVE BEHAVIOR IN EACH LANDSCAPE OF IMOIRI SUBDISTRICT, BANTUL REGENCY, YOGYAKARTA SPECIAL REGION

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Abstract. The Imogiri Subdistrict area has plain, hills and mountain topography which have varied land conditions. The varied land conditions are mostly used for agricultural land. In increasing agricultural production, the farming community in Imogiri Sub-district made efforts to conserve their land. This condition creates a phenomenon that exists in the farming community, namely conservative behavior towards the agricultural land they have in order to increase their agricultural production. The purpose of this study was to determine: (1) the characteristics of agricultural land in each landscape of Imogiri Subdistrict, and (2) the conservative behavior of farming communities in each landscape in the use and management of agricultural land addressing the existing land conditions. The design of this research is quantitative descriptive research. The population of this study was all farmers in Imogiri Subdistrict. The study sample was determined by quota, which is 50 farmers for each landscape, so the total sample was 150 people. The sampling technique is done with randomly. The research data was collected through observation, interviews, and documentation. The data collected then tabulated and analyzed descriptively. The results showed that: (1) characteristics of agricultural land: (a) plains dominated by irrigated fields, paddy-paddy-paddy cropping patterns, availability of sufficient water, sources of water from rivers, dominant types of agricultural crops in the form of paddy, (b) hilly dominated by rainfed / dry land, paddy-paddy-*palawija* cropping patterns, availability of sufficient water, sources of water from rivers and rain, dominant types of agricultural crops in the form of paddy and *palawija*, (c) mountainous dominated by rainfed paddy fields / dry land, patterns planting paddy-*palawija*-tobacco, the availability of insufficient / less water, sources of water from rain, dominant types of agricultural crops in the form of paddy, *palawija*, and tobacco, (2) the conservative behavior of farmers in each landscape varies in intensity; efforts are made to intensify planting and increase production, maintain fertility of paddy fields and care for plants, prevent possible damage to paddy fields due to flooding and drought, and apply mechanical / vegetative conservation methods.

1. Introduction

The Imogiri Subdistrict area which has plain, hills and mountain topography has natural resource reserves, one of which is agricultural resources. Utilization of agricultural resources in the region is adjusted to landscape conditions [4]. Excessive use of natural resources in the Imogiri Sub-district area



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can cause pressure on agricultural land. Pressure on agricultural land in Imogiri Subdistrict can be seen from changes in the use of paddy fields in 2000 covering 25.41% of the Imogiri Subdistrict area, in 2010 to 21.22% of the Imogiri Subdistrict area, or a decrease of 4.19 % [1,2]. One of the changes in the area of agricultural land use in Imogiri Subdistrict is that it is influenced by the increasing area of residential land triggered by the increasing number and density of the population. Changes in land use in Imogiri Subdistrict are a reflection of human efforts in utilizing and managing agricultural land resources that will affect humans and their environmental conditions. This certainly requires the role of farmers to adapt to the environment.

In line with changes in the area of agricultural land use in Imogiri Subdistrict, Panuju (1994) suggested that the occurrence of a shift in land use in an area could be caused by the occurrence of structural conversions in the region [6]. The characteristic of structural conversion is an increase in the number and density of the population. Increasing the number and density of the population will subsequently result in increased land requirements to support the development of settlements. The greater the need for land for settlements, the lower the use of agricultural land will be to a certain extent. This is also supported by the low ratio of economic rent for agricultural land to economic rent for non-agricultural sectors, so that it does not provide sufficient incentives to maintain farming. This condition is also found in Imogiri Subdistrict whose agricultural land area has decreased and shifted to settlements.

Pressure on agricultural land will cause problems in agricultural productivity, especially the productivity of paddy. This condition is the same as the problem of food in Indonesia which cannot be separated from the problem of the availability of paddy. To ensure the availability of paddy to meet the needs and demands of the community, it is necessary to have sufficient paddy stocks. Paddy stocks can be done at the farm level, which means that the farmers save their crops themselves. Stocks owned by farmers can then function as food supply stabilizers when food production or supply is insufficient.

The condition of agricultural land in Imogiri Subdistrict in various landscapes requires farmers to have differences in sociocultural management of agricultural land [4]. This difference will provide a picture of the conservative behavior of the farming community in addressing the conditions of agricultural land in various landscapes in Imogiri Subdistrict. Non behavioral causes that significantly influence farmer's behavior in conservation of paddy fields in Kulonprogo Regency are age, farmers' knowledge of conservation, farmer's attitude towards conservation activities, farmers' motivation in applying conservation principles, farmer activity in group, outside farming income, availability of organic materials, and group leadership [5]. The behavior of farmers in the conservation of paddy fields has no effect on increasing income. This is due to one of them because the pattern of crop rotation in one year still uses the pattern of paddy-paddy-crops, not with cash crops such as horticulture.

Components of behavior according to Marat (1984) are divided into three [3], namely: (a) cognitive components are behavioral components that relate to beliefs, ideas, and concepts. This cognitive component affects a person in terms of thinking that is in the form of processing, experience, and beliefs, as well as individual expectations about certain objects or groups of objects; (b) the affective component is a component that concerns emotional life so that a person can have an emotional judgment that can be positive or negative, happy or unhappy, afraid or not afraid; (c) a conative component is a component of behavior which is a tendency to behave or an easily affected state to act something on an object.

The process of behavior change will involve aspects of knowledge, skills, and mental behavior, so that they know, want and are able to carry out changes in their farming in order to achieve increased production, income, and improvement of family welfare through agricultural development in this case on a continuous counseling process as a process of behavior change. According to Setiana (2005), the process of behavior change is demanded so that the goals change not only because of the addition of knowledge, but it is also expected that there will be changes in skills and mental behavior that lead to better, productive, and profitable actions or work [3].

The behavior of farmers towards the characteristics of agricultural land with limited land available both individually and in groups is possible to have differences in each landscape. Characteristics of agricultural land in each landscape in Imogiri Subdistrict can be seen in this aspect: (a) types of paddy fields, (b) cropping patterns in paddy fields, (c) availability of water, (d) water sources, and (e) types dominant agricultural plants. Differences in the behavior of farming communities on the characteristics of existing agricultural land can be used as a reference framework in determining the strategy of farmers in dealing with the limitations of agricultural land in each landscape. Therefore the aim of this research is to find out: (a) the characteristics of agricultural land in each area of Imogiri Subdistrict, and (b) the conservative behavior of farming communities in each landscape in the use and management of agricultural land in response to existing land conditions.

2. Research Methods

The design of this research is quantitative descriptive research. The study was conducted to describe the characteristics of agricultural land in each landscape of Imogiri Subdistrict and the conservative behavior of farming communities in responding to the existing land conditions to continue implementing sustainable agricultural activities.

The research location is agricultural land in Imogiri Subdistrict. The selection of research locations was determined purposively by considering: (a) agricultural land that has a variety of landscapes (plains, hills, mountains), (b) differences in land characteristics in each landscape, (c) differences in conservative behavior of farmers in each landscape. The time of research starts from March to August 2018.

The population of this study were all farmers in Imogiri Subdistrict, amounting to 8,191 people. The research sample was determined by quota by taking a total of 50 farmers in the plains, hills and mountains, so that the total sample size was 150 farmers. Sampling of farmers used as respondents in the field was done by randomly in each village based on the distribution of landscapes. Farmers who were made respondents had criteria, namely: (a) were farmers who settled in Imogiri Subdistrict, (b) were farmers who managed agricultural land in Imogiri Subdistrict, and (c) were the heads of farmer households.

The type of data collected in this study consists of primary data and secondary data. These data are collected through observation, interviews, and documentation. Observations were made to get an overview of the study area. Interviews using research instruments in the form of questionnaires, which were conducted to farmer respondents in each landscape. Documentation is done by collecting data from libraries, the internet, and related institutions, such as BAPPEDA, BPS, Subdistrict Offices and Village Offices.

Analysis of the data in this study is in the form of quantitative descriptive analysis carried out to determine the characteristics of the land in each landscape of Imogiri Subdistrict and the conservative behavior of the farming community in addressing the existing land conditions described from the results of the frequency table.

3. Characteristics of Agricultural Land in Each Landscape of Imogiri Subdistrict

The characteristics of agricultural land in this study include the type of paddy fields, cropping patterns in paddy fields, availability of water, water sources, and dominant types of agricultural crops. The characteristics of farmland of the farming community in Imogiri Subdistrict based on landscape distribution are presented in Table 1.

Table 1. Characteristics of Agricultural Land in Farmers' Communities in Imogiri Subdistrict

No	Characteristics of Agricultural Land	Percentage (%) based on landscape		
		Plain	Hill	Mountain
1	Type of paddy fields			
	a. Irrigated rice fields	82	16	0
	b. Rainfed / dry land paddy fields	18	84	100

	Total	100	100	100
2	Cropping patterns in paddy fields			
	a. Paddy-paddy-paddy	68	4	0
	b. Paddy-paddy- <i>palawija</i>	24	62	6
	c. Paddy- <i>palawija-palawija</i>	8	16	28
	d. Paddy- <i>palawija-tobacco</i>	0	8	54
	e. Paddy- <i>palawija-bero</i>	0	4	4
	f. Paddy-cassava	0	6	8
	Total	100	100	100
3	Availability of water			
	a. Full filled	92	66	16
	b. Not enough / less	8	34	84
	Total	100	100	100
4	Water sources			
	a. River	82	24	0
	b. Drill wells	0	8	36
	c. Rain	8	24	48
	d. River and rain	10	26	4
	e. Drill wells and rain	0	18	12
	Total	100	100	100
5	Dominant types of agricultural crops			
	a. Paddy	68	4	0
	b. Paddy and <i>palawija</i>	32	82	38
	c. Paddy, <i>palawija</i> and tobacco	0	8	54
	d. Paddy and cassava	0	6	8
	Total	100	100	100

Source: field survey, 2018

The types of paddy fields in Imogiri Subdistrict consist of irrigated paddy fields and rainfed / dry land paddy fields. Based on landscape distribution, the farming community in Imogiri Sub-district which has irrigated paddy fields is 82% in the plain, 16% in the hilly landscape, while in the mountainous plain there are no irrigated fields. This condition indicates that the existence of irrigated paddy fields in the plain lands is the choice of farmers in managing agricultural land. The selection of irrigated paddy fields is seen from the flatter carrying capacity of the land and the existence of sufficient water sources for wetland agriculture or often referred to as irrigated paddy fields. The existence of 16% of irrigated paddy fields in hilly plain shows that the dominant agricultural activities in people's lives are supported by sources of springs that can meet the water needs of existing paddy fields. The types of rainfed / dryland paddy fields owned by farmers in the study area were 18% in the plain landscapes. The existence of rainfed paddy fields in the plains lands is found in the inter-hilly valley region that relies on the presence of rainwater, for example in the inter-hilly valley region of Wukirsari Village. 84% of the hilly plain is rainfed / dry land, while 100% (all) in mountainous lands are rainfed paddy fields leading to dry land.

Referring to the second land characteristic, namely the cropping pattern in paddy fields, it is known that the farming community in the study area applies the paddy-paddy-paddy, paddy-paddy-*palawija*, paddy-*palawija-palawija*, paddy-*palawija-tobacco*, paddy-*palawija-bero*, and paddy-cassava. Based on Table 4, plains landscape cropping patterns in paddy fields is dominated by paddy cropping patterns throughout the year (paddy-paddy-paddy) as much as 68%, followed by paddy-paddy-*palawija* as much as 24%, and paddy-*palawija-palawija* as much as 8%. Hills landscape cropping patterns in paddy fields consist of 4% paddy-paddy-paddy, 62% of paddy-paddy-*palawija*, 16% of paddy-*palawija-palawija*, 8% of paddy-*palawija-tobacco*, 4% of paddy-*palawija-bero*, and

paddy-cassava as much as 6%. Mountainous landscape cropping patterns in paddy fields consist of 6% paddy-paddy-*palawija*, 28% of paddy-*palawija-palawija*, 54% of paddy-*palawija-tobacco*, 4% of paddy-*palawija-bero*, and paddy-cassava as much 8%.

Based on these results it can be seen that landforms, farmers choose paddy cropping patterns throughout the year or paddy-paddy-paddy cropping patterns with consideration of water availability and the type of paddy fields in the form of irrigated paddy fields. The paddy-paddy-*palawija* cropping pattern dominates the hilly landscape, while the paddy-*palawija-tobacco* cropping pattern dominates the mountainous landscape. In the hills and mountains, a unique agricultural commodity from Imogiri Sub-District is formed, which is in the form of tobacco plants, although these plants are only found in the area of Selopamioro Village. The planting period of tobacco which reaches 4-5 months allows this agricultural commodity to be cultivated by farmers in the hills and mountains.

Characteristics of paddy fields based on water availability, in plain landscape as much as 92% of paddy fields are sufficiently available for water and 8% are insufficient, in hilly lands as much as 66% is sufficient and 34% is insufficient, while in mountainous areas 16% is fulfilled and 84% not enough water is available. These results support the dominance of the existence of irrigated paddy fields in the plain that require more irrigation water availability so that they can follow the paddy cropping pattern throughout the year, while in the hills and mountains the predominance of rainfed / dry land is due to pause or insufficient water which is low in the dry season so that crops appear are *palawija*, tobacco, cassava, and if the water becomes insufficient, the fields will be *bero*.

The water source in the plains is 82% of the river, as much as 8% of the rain, as much as 10% of the river and rain. The landscape of hilly water resources is 24% of the river, 8% of the well bore, as much as 24% of the rain, as much as 26% of the river and rain, as much as 18% of bore wells and rain, while the mountainous area is 36% from drill wells, as much as 48% from rain, as much as 4% from rivers and rain, and as much as 12% from bore wells and rain. The dominance of water sources in the plain stretches is obtained from the river, in this case Imogiri Subdistrict is crossed by two major rivers, namely the Opak River and the Oyo River, thus supporting the existence of irrigated paddy fields. In the hilly landscape, more irrigation water sources are obtained from rivers and rain, and the emergence of the wellbore phenomenon appears. Water sources in the hilly landscape in the form of rivers are obtained from the Oyo River flowing from above, from the Sewu Hills of Gunungkidul Regency. The phenomenon of the emergence of drill wells is needed when the river and rain are no longer able to meet water needs. In the mountainous landscape the condition of the water source is sufficient if the rain comes so that the dominance of the water source is rain and followed by the borehole which helps to provide water for tobacco plants during the dry season.

From Table 1, the dominant types of agricultural crops are as follows: in the plain land as much as 68% in the form of paddy, as much as 32% in the form of paddy and *palawija*; in the hilly landscape as much as 4% in the form of paddy, as much as 82% in the form of paddy and *palawija*, as much as 8% in the form of paddy, *palawija* and tobacco, and as much as 6% in the form of paddy and cassava; in the hilly landscape 38% is in the form of paddy and *palawija*, 54% of paddy, *palawija* and tobacco, and as much as 8% in the form of paddy and cassava. It can be concluded that the dominant types of agricultural plants that are in the plain landscape are paddy, in hilly landscapes are paddy and *palawija*, and in mountainous landscapes are paddy, *palawija* and tobacco.

Based on the discussion of the characteristics of paddy fields in Imogiri Subdistrict, it can be concluded that on the plains of land the type of land cultivated is irrigated paddy with paddy planting patterns throughout the year (paddy-paddy-paddy), sufficient availability of water sourced from rivers, and dominant types of agricultural crops paddy. The hilly plain of paddy fields cultivated is dominated by rainfed / dry land with paddy-paddy-*palawija* cropping patterns, adequate water availability in the rainy season with rivers and rain as the main water source, and dominant types of crops are paddy and *palawija*. The hilly landscape began to appear typical plants in the form of tobacco commodities. The mountainous landscape of paddy fields cultivated is dominated by rainfed paddy fields / dry land with paddy-*palawija-tobacco* cropping patterns with the availability of water not sufficient with water

sources depending on the rain with the help of boreholes. Types of agricultural crops are dominated by paddy, *palawija* and tobacco.

4. Conservative Behavior of Farmers' Communities in Each Landscape in Utilization and Management of Agricultural Land Responding to Existing Land Conditions

The conservative behavior of farming communities in Imogiri Subdistrict is seen from the behavior of farmers in intensifying planting and increasing production, maintaining fertility of paddy fields and maintenance of plants, preventing possible damage to paddy fields due to floods and droughts, and applying conservation (mechanical / vegetative) methods to the condition of agricultural land. Present in Table 2 below.

Table 2. Conservative Behavior of Farmer Communities in Imogiri Subdistrict

No	Conservative Behavior	Percentage (%) based on landscape		
		Plain	Hill	Mountain
1	Intensifying planting and increasing production			
	a. Make use of paddy fields by not allowing <i>bero</i>	100	80	42
	b. Utilizing all paddy fields that are controlled for farming	100	76	38
	c. Using short-lived superior seeds	88	68	30
	d. Utilizing rice fields to diversify plants ≥ 2 types	0	80	46
	e. Do cropping patterns regularly	82	70	26
2	Maintaining fertility of paddy fields and maintenance of plants			
	a. Fertilize regularly	100	100	100
	b. Overcoming / preventing pests / plant diseases regularly	100	100	100
	c. Cut and hoard the remaining plants	80	72	32
	d. Do weeding regularly	100	74	36
3	Preventing possible damage to paddy fields due to floods and droughts			
	a. Elevate the embankment of paddy fields to prevent excessive water entering	100	100	40
	b. Launch irrigation channels to prevent possible overflow of water	100	100	20
	c. Make backup water sources (drill wells, suck river water) to prevent drought	80	82	86
	d. Maintain and maintain irrigation channels so that paddy fields do not experience drought	82	90	32
4	Applying conservation (mechanical / vegetative) methods to the condition of agricultural land			
	a. Using certain land conservation methods based on slope	0	80	92
	b. Use certain plants that are planted on	0	76	84

certain slopes			
c. Using the land conservation method mechanically in the form of terraces with rock foundations	0	100	100
d. Using mechanical conservation methods in the form of embankments	0	80	86
e. Using vegetative land conservation methods in the form of cover crops by planting contoured perennials	0	82	90
f. Using vegetative land conservation methods in the form of cover crops by planting elephant grass	0	30	88
g. Use prey institutions to set cropping patterns	100	88	84

Source: field survey, 2018

The conservative behavior of farmers in intensifying planting and increasing production in the plain landscapes is as much as 100% by attempting to utilize paddy fields by not allowing *bero*, as much as 100% by using all paddy fields controlled for farming, as much as 88% by trying to use short-lived superior seeds. Much as 0% by using paddy fields to diversify crops ≥ 2 species, and as much as 82% by trying to make cropping patterns regularly. This shows that in the plains of land the farming community carries out various conservative efforts to increase paddy productivity in the form of optimal land use for farming, using short-lived superior seeds, not diversifying with the dominance of paddy plants, and maintaining a regular cropping pattern.

The conservative behavior of farmers in intensifying planting and increasing production in hilly landscapes is as much as 80% by trying to utilize paddy fields by not allowing *bero*, as much as 76% by trying to utilize all paddy fields controlled for farming, as much as 68% by trying to use short-lived superior seeds, as much as 80% by using paddy fields to diversify crops ≥ 2 species, namely planting paddy and *palawija*, and as much as 70% by trying to plant regularly. This shows that in the hilly landscape the farming community carries out various conservative efforts to increase their agricultural productivity in the form of optimal land use for farming, but during the dry season there is also a neglect of paddy fields into *bero* although small, using short-lived superior seeds adapted to the physical condition of hilly areas that lack water, diversify to increase the income of the agricultural sector, especially tobacco, and maintain a regular cropping pattern.

Conservative behavior of farmers in intensifying planting and increasing production in mountainous lands as much as 42% by utilizing paddy fields by not allowing paddy, as much as 38% by trying to utilize all paddy fields controlled for farming, as much as 30% by trying to use short-lived superior seeds, as much as 46% by attempting to use paddy fields to diversify plants ≥ 2 species, and as much as 26% by trying to plant regularly. This shows that in mountainous lands, farmer communities in conservative efforts in the form of optimal land use for farming are highly dependent on water sourced from rainwater so that during the dry season there is a neglect of paddy fields into *bero*, use of short-lived superior seeds adapted to physical condition of mountainous areas with minimal water is very dominant, diversifying to increase the income of the agricultural sector, especially tobacco commodities, and maintaining a regular cropping pattern are rarely sought.

Conservative behavior of farmer communities is seen in the effort to maintain fertility of paddy fields and care of plants in plain landscapes as much as 100% by regularly fertilizing, as much as 100% overcoming / preventing plant pests / diseases regularly, as much as 80% cutting and stockpiling crop residues, and as much 100% do weeding regularly. In 100% of the hilly landscape with regular fertilization, as much as 100% overcomes / prevents plant pests / diseases on a regular basis, as much as 72% cuts and hoards the remaining plants, and as many as 74% do weeding regularly, while in mountainous landscapes as much as 100% by regularly fertilizing, as much as 100% overcoming /

preventing pests / plant diseases on a regular basis, as many as 32% cut and stockpile crop residues, and as many as 36% do weeding regularly. Based on these results, conservative behavior can be seen from efforts to maintain fertility of paddy fields and care of plants by regularly fertilizing and preventing / preventing plant pests / diseases regularly carried out in all landscapes, while cutting and storing plant residues and weeding regularly more often done in plain and hilly plain, while in the mountains it is very rare.

Conservative behavior by preventing the possibility of damage to paddy fields due to floods and droughts in the plains, by 100% by raising paddy fields to prevent excessive water entry, as much as 100% by launching irrigation channels to prevent the possibility of water overflow by as much as 80% by making backup water sources (drilled wells, suck river water) to prevent drought, and as much as 82% by maintaining and maintaining irrigation channels so that paddy fields do not experience drought. In the hilly landscape, as much as 100% by raising the paddy fields to prevent the entry of excessive water, as much as 100% by launching irrigation channels to prevent the possibility of overflow of water, as much as 82% by making a backup water source (wellbore, sucking river water) to prevent drought, and as much as 90% by maintaining and maintaining irrigation channels so that the paddy fields do not experience drought, while in the mountainous landscape, as much as 40% by raising paddy fields to prevent excessive water entry, as much as 20% by launching irrigation channels to prevent possible overflowing of water, 86 % by making backup water sources (bore wells, sucking river water) to prevent drought, and as much as 32% by maintaining and maintaining irrigation channels so that paddy fields do not experience drought.

Based on these results, conservative behavior prevents the possibility of damage to paddy fields due to floods and droughts by raising paddy fields to prevent excessive water entry and launching irrigation channels to prevent the possibility of optimal overflowing of water in plain and hilly landscapes, while making backup water sources (drilled wells, siphoning river water) to prevent more drought in hilly and mountainous landscapes, as well as maintaining and maintaining irrigation channels so that paddy fields do not experience drought are mostly carried out in plain and hilly plain.

Conservative behavior by applying conservation (mechanical / vegetative) methods to the condition of agricultural land on plain landscapes, as much as 0% by using certain land conservation methods based on slope, as much as 0% using certain plants planted on certain slope, as much as 0% with using the land conservation method mechanically in the form of terraces with rock foundations, as much as 0% by using a land conservation method mechanically in the form of embankments, as much as 0% using vegetative land conservation methods in the form of cover crops with planting of contours of perennials, 0% with using vegetative land conservation methods in the form of cover crops by planting elephant grass, and as much as 100% by using prey institutions for setting cropping patterns.

Conservative behavior by applying conservation (mechanical / vegetative) methods to the condition of agricultural land in hilly landscapes, as much as 80% by using certain land conservation methods based on slope, as much as 76% by using certain plants planted on a certain slope, as much as 100% with using the land conservation method mechanically in the form of terraces with rock foundations, as much as 80% by using a land conservation method mechanically in the form of embankments, as much as 82% using vegetative land conservation methods in the form of cover crops by planting hard plants parallel to the contour, 30% with using vegetative land conservation methods in the form of cover crops by planting elephant grass, and as much as 88% by using prey institutions for setting cropping patterns.

Conservative behavior by applying conservation (mechanical / vegetative) methods to the condition of agricultural land in mountainous landscapes, as much as 92% by using certain land conservation methods based on slope, as much as 84% using certain plants planted on certain slope, as much as 100% with using the land conservation method mechanically in the form of terraces with rock foundations, as much as 86% by using a land conservation method mechanically in the form of embankments, as much as 90% using vegetative land conservation methods in the form of cover crops with planting contours of perennials, 88% with using vegetative land conservation methods in the

form of cover crops by planting elephant grass, and as much as 84% by using prey arrangements for setting cropping patterns.

Thus it can be concluded that conservative behavior by applying conservation (mechanical / negative) methods to the condition of agricultural land, for farming communities in the plain lands by using prey institutions to regulate cropping patterns and tend not to do other businesses, while in farming community in hilly landscapes and mountains by doing all the mechanical and vegetative conservation methods.

5. Conclusions

Research on the conservative behavior of farming communities in each landscape in Imogiri Subdistrict, Bantul Regency can be summarized as follows:

1. Characteristics of agricultural land in Imogiri Subdistrict are:
 - a. Plains of land which are cultivated in the form of irrigated paddy fields with paddy cropping patterns throughout the year (paddy-paddy-paddy), sufficient water availability sourced from rivers, and dominant types of agricultural crops in the form of paddy.
 - b. The hilly plain of paddy fields cultivated is dominated by rainfed / dry land with paddy-paddy-*palawija* cropping patterns, adequate water availability in the rainy season with rivers and rain as the main water source, and dominant types of crops are paddy and *palawija*. The landscape of the hilly area began to appear typical plants in the form of tobacco commodities.
 - c. The mountainous plain of paddy fields cultivated is dominated by rainfed paddy fields / dry land with paddy-*palawija*-tobacco cropping patterns with insufficient water availability, and water sources depend on rain with the help of boreholes. Types of agricultural crops are dominated by paddy, *palawija* and tobacco.
2. The conservative behavior of farming communities in each landscape in the use and management of agricultural land addresses the conditions of existing land:
 - a. Intensifying planting and increasing production through utilization of paddy fields by not allowing *bero*, utilization of all paddy fields controlled for farming, use of short-lived superior seeds, and regular cropping patterns in plain and hilly landscapes, while the use of paddy fields for crop diversification ≥ 2 species in hills and mountains.
 - b. Maintaining the fertility of paddy fields and the care of plants through regular fertilization and regular pest control / prevention of plant pests / diseases is carried out in all landscapes, while efforts to cut and accumulate crop residues and regular weeding are mostly carried out in plain and hilly plain.
 - c. Preventing possible damage to paddy fields due to floods and droughts through elevating the dike of paddy fields to prevent excessive water entry, expediting irrigation canals to prevent possible overflowing of water, and maintaining irrigation channels so that paddy fields do not experience more drought in the plain and hills while making backup water sources (bore wells, sucking up river water) to prevent drought is mostly carried out in hilly and mountainous landscapes.
 - d. Applying conservation (mechanical / negative) methods to the condition of agricultural land, in the landscape by using prey structures to regulate cropping patterns, while in hilly and mountainous landscapes through the use of certain land conservation methods based on slope, use of certain plants planted on certain slope, the use of mechanical methods in the form of terraces with rock foundations, the use of mechanical methods in the form of embankments, the use of vegetative methods in the form of cover crops with contours of perennials, and the use of vegetative methods in the form of cover crops with planting elephant grass.

6. Suggestions

Suggestions are recommended based on the results of the study as follows:

1. For the next researcher can do the same research with this research, it can be done by adding variables or changing the variables used.

2. The resources of agricultural land in Imogiri Subdistrict will be better if managed based on the characteristics of agricultural land in each landscape.
3. The conservative behavior of farming communities in Imogiri Subdistrict is needed in agricultural development in the research area because the participation of farmers in each landscape is the main key in agricultural development.
4. The involvement of the Bantul Regency government is very necessary for the supervision of the running of the agricultural system and the role of field extension officers in Imogiri Subdistrict is to bridge the government and the community.

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