

analysis_of_participation_and_participation_factor_of_water.pdf

by

FILE	ANALYSIS_OF_PARTICIPATION_AND_PARTICIPATION_FACTOR_OF_WATER.PDF (574.28K)	WORD COUNT	2896
TIME SUBMITTED	15-NOV-2020 09:24PM (UTC+0700)	CHARACTER COUNT	16120
SUBMISSION ID	1446505018		

PAPER • OPEN ACCESS

Relationship analysis of participation and participation factor of water users farmer association (P3A) in the management of irrigation at Bantimurung irrigation area

5
To cite this article: A N Tenriawaru *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **575** 012213

View the [article online](#) for updates and enhancements.

Relationship analysis of participation and participation factor of water users farmer association (P3A) in the management of irrigation at Bantimurung irrigation area

A N Tenriawaru, R Ramadhan, M H Jamil, L Fudjaja, and N M Viantika

Faculty of Agriculture, Hasanuddin University, Makassar , Indonesia

E-mail: nixia_gany@yahoo.com

Abstract. The needs in irrigation water of farmers in farming management is higher nowadays. In addition to the demands in fulfilling the water needs in rice production activities, the ability of farmers to manage the water resources well also become a necessity. Saptana, DKK (2001), stated that water and irrigation resource management is considered as one of the key components for the improvement in food security. Irrigation water management depends on the level of farmer's association of Farmers Water Users (P3A) as an organization that has the authority in the utilization, development and management of irrigation water. This research aims to analyze the relationship between participation factors with the participation rate of P3A members in the management of irrigation channels in Maros Regency. This research uses a qualitative-quantitative approach. Results showed that; age, land area, distance between paddy fields and irrigation channels is a factor that has a real connection with the participation rate of farmers in the management of irrigation channels. While the number of family members are dependents and education levels do not have a real connection with the participation rate of farmers in the management of irrigation channels.

1. Introduction

Utilization, development and management of irrigation systems at the tertiary level are the responsibility of the water-user farmer Assembly (P3A) and untuk to realize the development and management of good irrigation water It takes a strong, independent and empowered institutional that is ultimately able to increase agricultural productivity and production in driven, raising the nation's welfare of citizen and food security [1]. Participatory management objectives are for; 1. Increase the sense of togetherness, sense of owning and a sense of responsibility in the management of irrigation between the government and the Association of Water-users Farmers (HIPPA) and 2. The fulfillment of irrigation services that meet the expectations of farmers through efforts to increase the efficiency and effectiveness of sustainable irrigation management [2]. Some research related to the participation of farmers in the management of irrigation water has been conducted and one of the research was conducted by R. Putriany et al (2018) which showed a results that the participation rate of farmers P3A members in 3 groups were in the category where the participation rate is influenced by several factors, namely age, the number of family liabilities and the experience of farmer doing farming as farming manager [3].

Meanwhile, according to Director general of Agriculture infrastructure and facilities (PSP) of Ministry of Agriculture (Kementan) Sarwo edhy There are 5 pillars of modernization of irrigation, namely the reliability of water supply, the reliability of irrigation network, water management,



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

institutional and human resources [4]. Some important things of the 5 pillars are the institutional and human resources so as the role of P3A as an institution that formed on a group of farmers in the same region becomes an important component in managing or maintaining the Tertiary irrigation network and looking for solutions more independently of the issues concerning irrigation water emerging at the farm level.

Participation is ideally divided into several phases [5], namely; stage of decision making, implementation stage, evaluation stage or evaluations and stages of enjoying results. In each stage, the participatory level will be different, because there are many factors that become the basis or reason for one to participate. Research conducted by Hastika et al. (2019), indicating that the participation of farmers P3A members on the development activities of irrigation networks include [6]; Participation in the arrangement of group proposal plans and participation in the construction activities of tertiary irrigation tract that entirely shows the level of participation is lack of the form of participation, among others; contribution of thought, energy and funds. Still in Hastika research, it has not been explicitly explained the reason for the low participation rate of P3A in irrigation network development. Nevertheless, at the research of AY Antika (2017) It is explained that the participation rate of P3A members in the classification is more due to the involvement of all members of P3A in all stages of the program implementation are lower and not accompanied by mentoring and supervision of the related parties as well as personal reasons P3A members [7].

Community participation according to Cohen, J. and Uphoff (1977) is determined by internal factors to include individual characteristics such as age, gender, status in the family, education level, ethnic religion, language, occupation, income level, home distance with the location of activities/programs and land tenure and external factors that are all stakeholders in the program [8,9], among others; Community leaders, local governments, NGOS and third parties (NGOS, social foundations and colleges). The same result is also expressed by Wijayanti, N.A. (2011) that the factors that influence community participation in an activity/program among others; age, level of education, income and total family liabilities [10].

Lokita's research results Lokita (2011) show that participation is determined by internal factors including the ability of attitude and motivation and the ability of knowledge, skills and experience of individuals and external factors, namely opportunities that encourage individuals to participate in the program in the form of access [11]. While the research conducted by Hadi Suroso DKK (2014) shows that the difference in the level of community participation in development planning in Banjarnegara village through Musrebangdes is caused by [12]; A. Level of education where on a certain level of education the community has a tendency to actively participate, as the higher level of education then participation is also higher; B. The level of communication where the intensive communication of fellow citizens with its leadership and the social system in the community with the system outside is able to improve the role and participation of the community; C. Age where the older or senior person age then they give more opinion either input, advice or in terms of setting a decision; D. The kind of community work that is more flexible than the working hours allows them to participate more and E. Leadership levels that are able to recognize and capture the needs of the community tend to encourage participation.

Referring to some previous research that has been elaborated and the fact that the level of participated community or farmers in various programs/activities of government that generally are in the classification of lower or medium, so as varied factors underlying the activeness or participation, then the researcher interested to analyze the relationship between participation factor with the participation rate of farmers P3A in the management of irrigation in the irrigation region of south.

14

2. Research Methods

The object on this research was the farmer members of P3A, divided into member of the P3A (HULU) Karya Bersama, P3A Samaturu (middle) and P3A Sare Te'ne (downstream) at the Bantimurung Irrigation area of Maros Regency (table 1). The method that used in this research is a descriptive method that begins with data collection, data analysis and data interpretation, while applied a

qualitative approach. Through the process of interviewing, data and information are collected consisting of the participatory levels of farmer members P3A at each stage of the irrigation management activities and factors that underlie their participation in irrigation management activities. Measurement of farmer participation rate of P3A members was done by using *Likert Scale*, while the determining factor of participation at 4 measured by identifying age (year), education level (year), number of family liabilities (people), land area (hectares), distance of the residence from irrigation channel and distance between Paddy field and irrigation channel (metre).

Table 1. Farmer research object of P3A member of Bantimurung irrigation area, 2018.

P3A	Ni	N	n	$ni = \frac{N}{Ni} \times n$
P3A Karya Bersama	364	140	36	14
P3A Samaturu	364	102	36	10
P3A Sare Te'ne	364	122	36	12
Total	364			36

Since this research will analyze the relationship between participation rates with the determining factor of participation, then the design of the research that will be conducted is design correlation (relationship). Furthermore, the relationship between participation rate and deciding factor of participation is analyzed through *Chi Square* analysis with hypotheses; Ho: There is no significant linkage between the socio-economic and physical variables with the participation rate of farmers in the management of irrigation channels and H1: There is a significant relationship between socio-economic and physical variables with the level of farmer participation in the management of irrigation channels. Data processing using computer *Excel 2013* Software and *SPSS/PC* (Statistical Packed for Social Science/Personal computer) software.

3 Results and Discussion

The level of participation of farmers in the management of irrigation are measured using scoring method by grouping manageability activities into 4 phases in accordance with the statement of Rahmawati and Sumarti T. (2011), namely participation in the planning, implementation and evaluation which include activities [5]; cleaning, payment of IPAIR, rehabilitation, water distribution and periodic checking on irrigation channels and the utilization of the results include; delivery of water to farming land, water distribution with the right amount and time, increase in farming productivity also had a fair financial management, transparent and accountable. The results of data analysis on the participation rate of P3A farmers can then be seen in the table. 2

Table 2. Participatory farmer level of P3A member at irrigation management in Bantimurung irrigated area Maros Regency, 2018.

P3A	Activity	Score Range	Score	Participation rate
Karya Bersama	8 Planning, implementation, evaluation and utilization of results	20 – 100	69.26	Are
Samaturu	8 Planning, implementation, evaluation and utilization of results	20 – 100	66.00	Are
Sare Te'ne	8 Planning, implementation, evaluation and utilization of results	20 – 100	50.16	Are

Source: After-processed primary Data, 2018.

The level of Farmers Participation in P3A Karya Bersama members, P3A Samaturu and P3A Sare Te'ne in the management of irrigation on average was in the medium category that indicated each member of P3A was already aware of the role and responsibility to participated in utilizing and managing irrigation channels that will impact the results. The members of P3A have begun to realize theirs role to devote energy, ideas, or thoughts for real are affected the final goal that is wanted to be achieved from the management of irrigation channels. An active participation of farmers in the activities of irrigation management was certainly due the support of human resource capability that involved in the organization with vary characteristics on each [13].

The determinants of P3A member farmers' participation in irrigation management at the Bantimurung Irrigation Area in this study were formulated based on the description of Cohen, J. and Uphoff, Sunarti, Wijayanti, N.A., and Lokita namely; age (years), level of education (years), number of dependents (people), land area (hectares), distance of residence to the irrigation channel (meters) and location of rice fields from the irrigation channel (meters) [8–11]. The results showed that the average age of farmers in P3A Samaturu was older compared to farmers in others P3A. If age took as the basis for measuring one's maturity, it can be said that farmers in P3A Samaturu are relatively more mature than farmers in others P3A. Affirmed by Hurlock (2002), that at the age of 40 years a person is in the category of early middle age and at that age there is amature physical and mental change that is the basis for someone to maintain the achievements that have been previously achieved [14]. In addition to age, education level, the number of dependents of the distance of the residence to the paddy field and the location of the paddy field to the irrigation network on average in P3A Samaturu farmers seemed higher compared to farmers in the other 2 P3A. The conclusion that can be drawn from the data determining factors of participation of P3A member farmers is that with the average value that is not much different between one P3A and another P3A, the desire of the farmers to participate in irrigation management is certainly not too different.

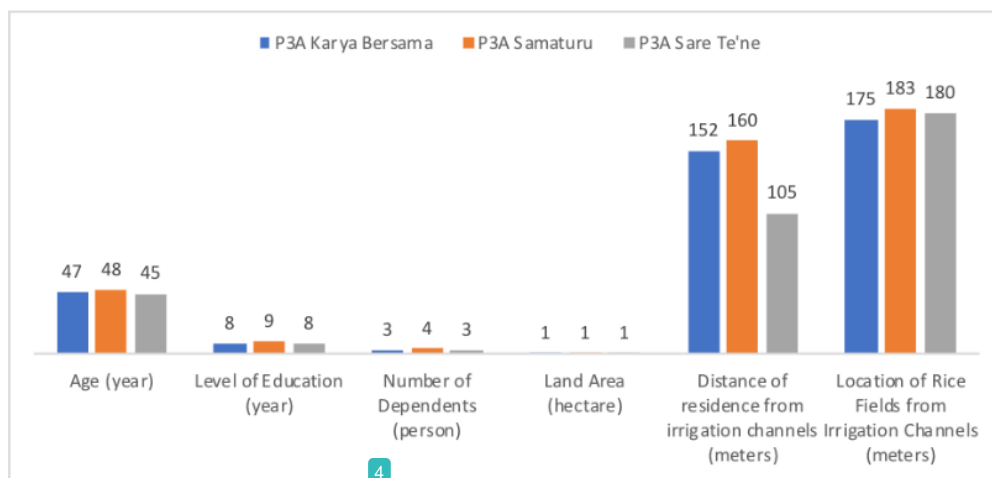


Figure 1. Determinant factors of participation of p3a member farmers on average in irrigation management in Bantimurung irrigation area, 2018.

Source: Primary Data After Processing, 2018

The level of participation of P3A member farmers and the determinants of participation of 3 P3As in the Bantimurung Irrigation Area have been described and show the fact that each P3A has tried to increase its participation even though it is not yet optimal and of course their participation is motivated by several determinants attached to themselves. The extent of the relationship between the level of participation and the determinants of participation then analyzed with the results shown in Table 3.

Table 3. Results of the analysis of the relationship between the level of participation and the determinants of participation in the management of irrigation in the Bantimurung irrigation area, 2018.

Participating factor	X ²	Value Cramer's V	Exact Significance (Sig)	Relationship	C Coefficient
Ages	6.898	0.438	0.034	Real	-0.161
Level of education	3.227	0.181	0.579	No	0.139
Number of dependent	0.930	0.161	0.748	No	-0.138
Land Area	9.733	0.441	0.024	Real	-0.104
Distance from residence	8.226	0.478	0.017	Real	-0.079
Location of rice fields	8.130	0.475	0.013	Real	-0.381

Source: Primary Data After Processing, 2018

4. Conclusion and Suggestions

In general, the level of participation of farmers in the management of irrigation channels in P3A Karya Bersama (Upstream), P3A Samaturu (Central) and P3A Sare Te'ne (Downstream) are classified as medium where age, land area, distance of residence from irrigation channels and location of rice fields from the channel irrigation becomes a determining factor for participation. While the factor on the number of family dependents and education level are factors that has no relationship with the level of farmer participation in the management of irrigation channels in the Bantimurung Irrigation Area, Maros Regency.

References

- [1] Kadir M and Ahmad A 2017 Penerapan Pengelolaan Irigasi Partisipatif (PIP) Bagi P3A di Kecamatan Turatea Kabupaten Jeneponto, Sulawesi Selatan *J. Din. Pengabdian*. **1** 105–12
- [2] Prasetyo H 2012 Studi pemberdayaan lembaga pengelola jaringan irigasi di tingkat desa *J. Tek. Pengair.* **1** 27–36
- [3] Putriani R, Tenriawan A N and Amrullah A 2018 Pengaruh Faktor-faktor Partisipasi Terhadap Tingkat Partisipasi Petani Anggota P3A Dalam Kegiatan Pengelolaan Saluran Irigasi *J. Sos. Ekon. Pertanian*. **14**
- [4] Kurniawan A 2019 Peran P3A Optimalkan Air Irigasi Jadi Kunci Tingkatkan Produktivitas *Kompas.com*
- [5] Sumarti T 2011 Analisis Tingkat Partisipasi Peserta Program CSR Pemberdayaan Ekonomi PT. Arutmin Indonesia *J. Transdisiplin Sosiologi, Komun. dan Ekol. Mns.*
- [6] Hastika H, Tenriawaru A N and Amrullah A 2019 Partisipasi Petani Anggota P3A dalam Pengembangan Jaringan Irigasi (PJI) di Daerah Irigasi Taccipi *J. Sos. Ekon. Pertanian*. **15** 124–34
- [7] Antika A Y 2017 *Tingkat partisipasi anggota P3A dalam program pengembangan jaringan irigasi (PJI) di Kelurahan Fajar Esuk Kecamatan Pringsewu Kabupaten Pringsewu* (Universitas Lampung, Bandar Lampung)
- [8] Cohen J M and Uphoff N T 1977 *Rural development participation: Concepts and measures for project design implementation and evaluation* (New York: Cornell University)
- [9] Sunarti S 2003 Partisipasi Masyarakat dalam Pembangunan Perumahan Secara Berkelompok *J. Tata Loka* **5**
- [10] Wijayanti N A 2011 *Tingkat Partisipasi Masyarakat Program CSR Desa Telaga dan Tingkat Kemanfaatan Program (Kasus di Karawang Internasional Industrial City)* (Institut Pertanian Bogor)
- [11] Lokita D A 2011 *Partisipasi Masyarakat Dalam Program Pengelolaan Sampah (Kasus Implementasi Corporate Social Responsibility PT Indocement Tungal Prakarsa Tbk. Di Desa*

Gunung, Sari, Kecamatan Citeureup, Kabupaten Bogor) (Bogor: Institut Pertanian Bogor)

- [12] Suroso H, Hakim A and Noor I 2014 Faktor-faktor yang mempengaruhi partisipasi masyarakat dalam perencanaan pembangunan Di Desa Banjaran Kecamatan Driyorejo Kabupaten Gresik *Wacana J. Soc. Humanit. Stud.* **17** 7–15
- [13] Tenriawaru A 2009 *Perkumpulan Petani Pemakai Air* (Bandung: Unpad Press)
- [14] Hurlock E B, Istiwidayanti, Sijabat R M and Soedjarwo 1990 *Psikologi perkembangan: Suatu pendekatan sepanjang rentang kehidupan* (Jakarta: Erlangga)

ORIGINALITY REPORT

% **14**
SIMILARITY INDEX

% **12**
INTERNET SOURCES

% **10**
PUBLICATIONS

% **7**
STUDENT PAPERS

PRIMARY SOURCES

1 Submitted to University of Lancaster
Student Paper % **3**

2 www.er-c.org
Internet Source % **2**

3 digilib.unila.ac.id
Internet Source % **2**

4 journal.unhas.ac.id
Internet Source % **2**

5 A N Tenriawaru, A J Annisa, Heliawaty, M Salam, N M Viantika. "Trends of shallot retail prices at traditional market in Makassar", IOP Conference Series: Earth and Environmental Science, 2020
Publication % **1**

6 jurnal.fp.unila.ac.id
Internet Source % **1**

7 Lili Afrylia Ibrahim, Welson M. Wangke, Melsje Y. Memah. "PARTISIPASI ANGGOTA P3A DALAM PEMELIHARAAN JARINGAN IRIGASI", % **1**

AGRI-SOSIOEKONOMI, 2017

Publication

-
- | | | |
|----|---|------|
| 8 | Mohamad Joko Susilo, Badrun Kartowagiran, Dwi Sulisworo. "Figure of community support in achieving Muhammadiyah school autonomy progress", International Journal of Evaluation and Research in Education (IJERE), 2019
Publication | % 1 |
| 9 | pertambahan.fst.uinjkt.ac.id
Internet Source | % 1 |
| 10 | id.123dok.com
Internet Source | <% 1 |
| 11 | mafiadoc.com
Internet Source | <% 1 |
| 12 | Resti Anggraini, Kordiyana K Rangga, Tubagus Hasanuddin. "PARTISIPASI PETANI DAN KEBERHASILAN PROGRAM PENGEMBANGAN USAHA PANGAN MASYARAKAT (PUPM) DI KECAMATAN PALAS KABUPATEN LAMPUNG SELATAN", Jurnal Ilmu-Ilmu Agribisnis, 2019
Publication | <% 1 |
| 13 | so05.tci-thaijo.org
Internet Source | <% 1 |
| 14 | eprints.unm.ac.id
Internet Source | <% 1 |
-

15

Hafiza Ayu Rizqi, Sumaryo Gitosaputro, Serly Silviyanti. "PARTISIPASI ANGGOTA KELOMPOK TANI DALAM PROGRAM UPAYA KHUSUS PADI JAGUNG KEDELAI (UPSUS PAJALE) DI KECAMATAN METRO BARAT KOTA METRO", Jurnal Ilmu-Ilmu Agribisnis, 2019

Publication

<% 1

EXCLUDE QUOTES ON

EXCLUDE BIBLIOGRAPHY ON

EXCLUDE MATCHES < 5 WORDS