Islamic Studies Journal for **Social Transformation**

Volume 1, Nomor 1, 2017



PARTICIPATIVE MAINTENANCE OF UPSTREAM PUSUR SUB WATERSHED AREA THROUGH CONSERVATION FIELD SCHOOL IN MRIYAN VILLAGE MUSUK SUB DISTRICT BOYOLALI REGENCY

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Abstract

This research is done to describe the process of participative maintenance by 'sekolah lapang konservasi' in the upstream area of Sub Watershed Pusur, so we can understand the condition of Farmers in the Mriyan village, and to understand the impact of the participative maintenance of Sub watershed Pusur in the Mriyan village that will be observed from the actualization of farmer participation in Mriyan Village. This research used qualitative approach with descriptive strategy in Mriyan Villages Sub District Musuk District Boyolali. The location is choosen because of the topography of the area as a water absorption area and water catchment area along the Sub Watershed Pusur. The data collection technique uses in depth interview method, focus group discussion, and participative observation. After all the data is collected, then data will be analyzed to form a finding that Skolah Lapang Konservasi is a kind of community participation in Mriyan village in maintaining Sub watershed Pusur conservatively. The people of Mriyan's support is actualized in the form of konservasi field school, the effort and the decision making, that are actively in charge in social learning, net working, and maintaining the resource of thee people. From this thing, the maintenance will impact various aspect, such as: the sustainability of Sub Watershed Pusur, and pushing the stakeholders in caring for Sub Watershed Pusur with the principality of conservation.

Keyword: Conservation Field School, Participative Maintenance, Pusur Sub W



A. INTRODUCTION

The river stream area simply meant as an area where the water flow from the upstream to downstream. If we follow the policy of the law that have been realized by the government which is the 'UU No.7 Tahun 2004, watershed is understood as a landmass that are one in unity with the river and its creeks and it has the function to naturally contain, saving, and flow the water from rainfall into the lake or the sea. Physiographically (Geomorphology) watershed is classified into three kind of area. First is the upstream area. This area has the characteristic as a production area or commonly known as water infiltration area. Second is the middle stream area. This area function as a metrial distributor that are produced from upstream area. Third is the downstream area. Coming from the maintenance issue mentioned above, there are things that need to be examined regarding Sub Watershed Pusur. The sub watershed Pusur area span across the upstream until the downstream where the downstream is located in the Sub- District Juwiring area and the Sub-District Delanggu, District Klaten, Central Java Province, that ended into the primary stream of Bengawan Solo River and is the middle tranverse part of Sub-District Polanharjo and the Sub-District Tulung District Klaten. While, the upstream part span upward in Sub-District Musuk District Boyolali.

Ever since 2003, comunity based program and activities with the regard of the Sub Watershed Pusur maintenance was initiated. The development can only touch those in downstream and middle area. Some institution and community element have intervene on the subject. The performance that was conceptualized have been referring to one plan and one policy. However, the reinforcement in the upstream area is not really touched and it tend to be ignored. In role, upstream area is the supporting area and also the water absorption area (production function). If it is not touched and centralized, the impact will be the unbalanced ecosystem of upstream, middle, and downstream area. Talking about upstream area, the condition of upstream area in sub watershed Pusur is having quite a change across time. The condition of ecosystem degradation is also been worsened by the increased number of critical land in the village of that upstream area.

One that become a concern is Mriyan village. The condition of thecritical land in Mriyan village can reach into 269.6869 ha. With the critical land composition reaching the number 115.7875 ha and land with critical potential within 153.8710 ha. This number is increasing looking back at the last two years. From the year 2012 until 2014. The number of critical land that are increasing is also affected by the intensity of disaster that are increasing every year. From the eruption of merapi in 2010, Mriyan village is known as the village that brought the biggest erotion chunk and landslide. The great amount of point with the 45° slope, and the absent of vegetation cover caused by the tobacco commodity in the villager's land. With the emergence of this various problems, it will threaten the living system of the community. Thus, periodical assistance and the awareness of natural conservation is needed. One of the suggestion that are deemed as fitting is the 'Sekolah Lapang Konservasi' that have been running since 2016. Periodical assistance and the focus on the change for the society in regard to conservation.

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¹ Chay Asdak, *Hidrologi dan Pengelolaan Daerah Aliran Sungai*, (Yogyakarta : Gadjah Mada University Press, 2014), p. 107



B. RESEARCH METHODOLOGY

This research is done in Mriyan village Musuk Sub-District Boyolali Regency. The location is choosen in accordance to some reason: (1) Mriyan village is a water catchment area, (2) Mriyan village is an upstream area with the potential of the largest area in comparison with other village in upstream area of Sub Watershed Pusur that serve as a production area and the suportlocation in the middle and the downstream, (3) it has a significant problem from the high number of critical land, the high number of disaster intensity, and the decrease in the erosion defensive vegetation, (4) The receiver and the participant community that support the conservation program in the Sub Watershed Pusur area. From the study on the problem that are present in the area of Mriyan Village and the program that have already been initiated from 2015, researcher understand deeply in regard to any social dynamic that are present using the approach of qualitative descriptive research. The data source that are used is data taken from the actual site (primer) and data taken from document, archive, and documentation result in accordance to the research. This research is done with the duration of 11 month from December 2016 to October 2017.

For the success of this research, the research employ the research technique with indepth interview, observation with participation, Focus group discussion.³ For the validation of data, this research is strengthened by the triangulation technique. In deciding the research subject, the researcher is leanig toward "purposive sampling" or commonly known as "criterian based selection".⁴ The researcher position is to choose purposively based on various judgement and criteria determined by the researcher.⁵ There are certain rules and standardization for deciding the informant subject. The data processing and analysis use Miles and Huberman analysis method.⁶ There are repeating cycle from the data collection, data presentation, data reduction, and the conclusion drawing as well as data verification.⁷ From the data analysis model that adopt the Miles and Huberman analysis is tend to more focused on the observed data cycle.⁸ If in any case there is a lack of data and that the data is not yet deluded so it will be repeated back into the collection step, presenting it again, reducing it again, and also taking another conclusion again.⁹ Procedurally the research consist of four research

²Deddy Mulyana, *Metodologi Penelitian Kualitatif Paradigma Baru Ilmu Komunikasi Dan Ilmu Sosial Lainnya*,(Bandung: PT. Remaja Rosdakarya,2001), p. 89-90

³ Benyamin F. Crabtree & William L. Miller, *Doing Qualitative Research*, (Sage Publications International Educational and Professional Publisher: Newbury Park: London, 1992), p. 203

⁴Judith P. Goetz dan Margaret D. LeCompte, *Ethnography and Qualitative Design In Educational Research*, (Orlandio Florida : Academic Press Inc. 1984), p. 120

⁵ Burhan Bungin, Metodologi Penelitian Kualitatif, (Jakarta: PT. Rajagrafindo Persada,2011), p. 75

⁶ John W. Creswell, *Penelitian Kualitatif & Desain Riset Memilih Diantara Lima Pendekatan*, (Yogyakarta : Pustaka Pelajar, 2015), p. 213

⁷ Benyamin F. Crabtree, dan William L. Miller, *Doing Qualitative Research*, (Sage Publications International Educational and Professional Publisher: Newbury Park: London,1992), p. 98

⁸ Jerome Kirk dan Marc L. Miller, Reability and Validity In Qualitative Research, (London: Sage. 1985), p. 67

⁹ Koentjaraningrat, *Metode – Metode Penelitian Masyarakat Pengamatan Sebagai Metode Penelitian,* (Jakarta : Lentera,1983), p. 87



step (1) the preparation stage, (2) field stage, (3) data analysis stage, (4) the writing and report stage. (4)

C. RESULT AND DISCUSSION

1. Mriyan Village and Sub Watershed Pusur Condition

In administration, Mriyan village is located in Musuk Sub District Boyolali District Central Java Province. It is surrounded by national forest under the management of *Taman Nasional Gunung Merapi* (TNGM). Hidrologically, it is included as an upstream area of Sub Watershed Pusur. The distance it have from Mount Merapi is 5 km, causing a high potential of eruption disaster in the area. It have been included as an area of extreme disaster awareness I.¹¹ The height that reach 1,342 ha place Mriyan village as the highest along the hidrology line of the Sub Watershed Pusur. It is also an area with 284,659 wide of water catchment area in comparison with other village that are in the upstream Sub Watershed Pusur area.¹²

Tabel 1. The Mrivan village usage of land

Number	Land Use	Total
	Yard/Building /	
1	Emplacement	59.3225 ha
2	Farm / Garden	153.8715 ha
3	Prairie area	25.0000 ha
4	Forest land	15.0000 ha
5	Others (Graveyard/publicfacility / social)	31.4650 ha
To	otal	284.6590 ha
	Bended land/Village	
6	inventory	36.9605 ha
7	Potentially Critical land	153.8710 ha
8	Critical land	115.7875 ha

Data source: Mriyan Village Monograph 2016

The hilly location and the steep cliff that are more than 15% indicate an appropriate location for conservation intervention. The condition of the problem is also apparent with the high of critical land number that are present in Mriyan Village.¹³

¹⁰ Patilima, Hamid, Metode Penelitian Kualitatif, (Bandung: Alfabeta, , 2007), p. 78

¹¹ Data BPBD Boyolali Tahun 2016

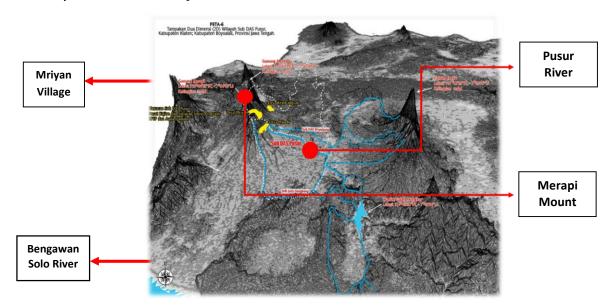
¹² Data BBWS Solo Tahun 2016

¹³ Monografi Desa Mriyan Tahun 2016



From the table1, It is explained that the area of the land with critical condition can reach the number of 153.8710 ha. While the land with critical condition can reach 115.7875 ha. With the area that are divided into three hamlet. There are 21 RT with 3,219 people, with profession dominated by farmer. Other people do trading, civil servant, and work in private sector. The condition of spatial conditioning of Mriyan village is divided by hamlet. I, II, III is bordered by cliff with high rate of slope. Because of that, to access the inter-hamlet location we have to cross the cliff first. The prized commodity of the people are tobaccos. While, for the daily need the people is heavily helped by sprinkled rose flower. Nearly every farmer in the area of Mriyan village sell Rose flower. Everyday, they sell it by Rp. 15.000 - Rp. 20.000 / 2 Kg.

Mriyan village position with the most upstream topography is important for the conservation of Sub Watershed Pusur. In general Sub Watershed Pusur is known locally as Pusur river. It span across 36,576 Km.



Pict 1. Topography Map of Sub Watershed of Pusur

Pass by Klaten and Boyolali in the Central of Java. The river divided into several parts. The upstream is on Musuk regency, Boyolali; the main-river on Tulung regency; and downstream on Delanggu, Juwining and Wonosari regency, Klaten. Pusur is categoried as a small river because of its width. The average width for a river is 7-10 m. The estuary of Pusur intersects to Bengawan Solo, the biggest river in Java. As part of watershed, a strong affinity in Pusur is needed because the river is expected to balance the ecosystem around it. The average width for a river is expected to balance the ecosystem around it. The average width for a river is expected to balance the ecosystem around it.

In geomorphology aspect, there should be an integrative system among upstream, downstream and main-river. It means those parts are connected. The upstream of Pusur watershed will not be able to preserve its environment without the

¹⁴ Data BPDAS Solo 2016

¹⁵Chifamba,O., "Integrated Watershed Management for Minimizing Land Degradation and Enhancing Livelihoods of Resourches Poor Farmer A Case of Pungwe River Watershed," Zimbabwe, Journal of Sutainabe Development in Africa, Volume 13, No.8, 2011, 254



main-river. And it is also applied to main-river which is needed the upstream as main producer of water. The main-river need to accord the upstream's demand of conservation although water is mainly used on the main-river for farming and fishery. We need to aware the preserve of each other. The downstream is also accord to the main-river and upstream. Problems regarding sediment and flood are always the annual disaster for people around the downstream of Pusur. Thus, there should be a direct and integrated participation among parts of river. A good system and policy are needed to manage a river.

2. Pusur Sub Watershed Management Through Conservation Field School

Indeed there are activities focusing on the environment of Pusur since 2003. Those activities are the result of cooperation with local government and PT. Tirta Investama Klaten with their CSR (Cooperate Social Responsibility) program. All of the activities are partials, an integrated participation among upstream area, downstream area and main-river area is not yet happen.¹⁷ Hence, an idea to manage the upstream area of Pusur watershed appears. There are activities that could be implemented for this problem:

2.1. Organizing Parties in Sub Watershed Pusur

To manage Pusur watershed can not be done partially. Indeed, it needs involvement from stakeholders, e.g. private institutions, local organizations and government. Other than that, it also needs a party to organizing the stakeholders. This party will be the one to unite and communicate between parties in order to manage Pusur watershed, and there are Klaten River School and Boyolali River School, Public Work Services, Agriculture and Plantation Services, Tourism Services and villages alongside Pusur riverbanks. Implementation for this work starts with study of Pusur watershed using transect method in a participatory manner. It starts from upstream area to main-river area (26 km). The purpose for this comprehensive study is to provide the latest data of Pusur. We expected this process to unite parties into a mutual interest.

From this study, we make a program design (identification of problem, potentiality and future prospect) to manage Pusur watershed.¹⁹ Non-formal organization will be the accommodator of all the activities in and related to Pusur. The main activity will be handled by the main-river area, focusing on agriculture, waste disposal and communal sanitation. In the upstream area, there are conservation field school, tourist village and ground and water conservation. Meanwhile, the downstream area, farmers will be in charge in water distribution of Pusur. Those parts have their

¹⁶Suwarto dan Anantanyu, Sapja, "Improving Land Conservation in Dryland Food Crops Farming In Sub Watershed Upstream Solo, Indonesia, "International Journal of Ecology & Development, Vol. 31, Ceser Publications, 2016, 187

¹⁷ Aprillia Theresia, Dkk, *Pengembangan Masyarakat Community Development Acuan Bagi Praktisi, akademisi, dan Pemerhati Pengembangan Masyarakat,* (UPT. Penerbitan dan Percetakan UNS : Surakarta, 2014), p. 102.

¹⁸ Jim Ife dan Frank Tesoriero, Community Development : Alternatif Pengembangan Masyarakat di Era Globalisasi, (Yogyakarta : Pustaka Pelajar, 2014),p. 246

¹⁹ Johnson, A Trainer Guide To Andragogy, Revised Edition, Washinton DC, (Washinton DC: Departement Of Health And Walfare. 1973), p. 56



own potential for resource development however their activities are still separated. Therefore, Pusur watershed needs its own institution to maintaining its parts.²⁰

There are stages that need to be passed in order to develop an institution to manage Pusur watershed. Comprehensive study of Pusur becomes the first stage, following with reporting result of the study by transect subject around Pusur area. In this study, the focus of data will be lead to several indicators (morphology of river, disaster, infrastructure, biota, vegetation, social, economic, culture and water resource) alongside riverbanks, main-river, and river border. The indicators are the guidance to make a new program and also to monitoring the future institution from upstream to downstream.

From some intensive meetings held by the stakeholders, eventually some parties (local government and volunteer communities) came with an idea to form an official institution. The purpose of the institution is to balancing every parties concern regarding their needs of Pusur. The first organizer discussed about activities around Pusur. The upstream area focusing on ground and water conservation, the main-river on waste disposal and water management, the downstream focusing on preventing flood and water management. On February 18th 2017, an institution for discussing problem around Pusur is formed. Each area will have their responsibility to preserve Pusur. This insituion is called as "Pusur Institute", a forum to discuss their knowledge regarding Pusur and its area, e.g. conservation field school which is established in 2015, agriculture school to prevent chemical residue, domestic waste disposal management, and tourist village. In downstream area, disaster prevention and irrigation team will manage irrigation. From this knowledge, Pusur Institute will be the institution to manage all of the activities from upstream area, main-river area, and downstream are.





Pict 2. The Process of Institutional Pusur Establishment

2.2. Conservation Field School

Conservation field school is an activity created by farmers association in Mriyan village as means to encounter environment degradation problems in Pusur watershed area. One of the main topics of conservation field school is ground and water conservation. About 20 farmers are joint this activity and apply adult education principles. At first, conservation field school appeared from problem of farmers; their

²⁰Totok Mardikanto, *Penyuluhan Pembangunan Pertanian*, (Surakarta : Sebelas Maret University Press, 1993), p. 125



reluctance to improve environment around Pusur. This is the biggest problem that has to be encountered by government and initiator. People of Mriyan refused to plant crops on their land which is considered will shift the seeded plants, tobacco and rose sowing. Indeed, people need to be explained and given the alternative solution to replace tobacco and rose sowing. Because of this problem, conservation field school was built by local government for one period.

Pusur Sub Watershed is managed by 2 farmer associations. The first is women farmer association "Sekar Dewani." This group was originally established to gather women in Mriyan but they changed their purpose to be an activity field association, such as flower school to learn flower in Mriyan. The second farmer association is a group of men. Their intention is to manage Mriyan as a tourist village. Ever since, it started, conservation field school is focusing on technical civil conservation and vegetative, e.g. cultivation of critical land and planting conservation plant.

The process in operating conservation school takes a long time with systematic routine activity.²¹ There are systematic activities processes of field conservation school : (1) Early organizing by choosing the location, member, and building a commitment. The first step done by facilitator is social organizer process. Choosing a good location for field school is determining the success.²² The location should be strategic, easy to reach by farmer, and become a learning center for farmer. A member who will participate has to commit to do field school. (2) Identification field test as media learning. Field test is media test to find a new knowledge in field school. Field test will be a source of knowledge for farmer.²³ (3) Learning Contract. Learning contract for field school aims to give a motivation and build a commitment together with the member of field school. (4) Make a curriculum becomes the learning object for field schoolwhich gets from identifying problem. The finding problem becomes a learning object for the process of field school. (5) Routine meeting. Conservation field school will operate periodically.²⁴ The schedule is created by an agreement in the forum. Basically, it was done for one period. (6) Reflection activity. Reflection in field school will be done by participative. The purpose is to find and to see the effect of conservation field school. Basically, model of conservation field school in Mriyan village divided into 2 aspects. For more explanation will be explained below:

a) Chrysanthemum Flower School.

Field school of chrysanthemum flower is not emerging because of the program brought by facilitator. It is because of the needs of female farmer group of Sekar Dewani in order to increase the number of female farmer group's capacity. In addition, it looks from the local ability. The majority of female farmer member in Mriyan village has ability in flower cultivation even though the types of flower are

²¹ Mansour Fakih, Dkk, *Pendidikan Populer Panduan Pendidikan Metode Kritis Partisipatoris*, (Yogyakarta: Insistpress, 2004), p. 76

²² Mansour Fakih, Dkk, Pendidikan Popular: Membangun Kesadaran Kritis, (Yogyakarta: Insistpress, 2010), p. 87

²³ Paulo Freire, *Politik Pendidikan Kebudayaan, Kekuasaan, dan Pembebasan*, Yogyakarta : READ, 2009), p. 78

²⁴ W.A Smith, *The Maning Of Conscientacao : The Goal Of Paulo Freire's Pedagogy,* (Amherst : UMASS Center For International Education, 1976), p. 129



different. However, the treatment for the plant is not different. It begins from visiting chrysanthemum flower cultivation farmer in Kaliurang City , Sleman Regency, Yogyakarta Province. They start to curious to adopt the technology of chrysanthemum flower cultivation.



Picture 2. Process of field school of Chrysanthemum flower in Mriyan Village.

Field school of chrysanthemum flower followed by 20 farmers comes from housewife. After take care their child and house, they start to do their routine activity. Every Thursday, they gather and begin with routine observation. Start from the development, leaf condition, stem, and treatment to chrysanthemum, it will be noted in details to make sure the adaptation of chrysanthemum flower in Mriyan village land. It is still on the test category right now and the next step will be on strengthening period for the technique and business farmer. There is one facilitator comes from LPTP (Institute for Rural Technology Development) Surakarta and one expertise farmer from Kaliurang that still commit to build a network with female farmer of Sekar Dewani. Chrysanthemum flower school is held 4 months in one period. It starts from the seed selection; land manufacture, fertilization, planting, treatment, harvesting, and marketing become one curriculum.



b) Conservation Field School of Vegetative and Civil Technical.

Farmer should find the solution to solve a critical land problem which increases year by year in Mriyan village. Since 2016, village government along with LPTP (Institute for Rural Technology Development) Surakarta tries to organize participative in order to find the alternative solution. Learn from the previous year, there is no farmer motivated to do an environment improvement with neither conservation vegetative technique nor civil technique. Hence, facilitator starts to make a step to do mentoring periodically and there should be a field test as a proof for farmer. This proof will motivate the farmer to do that kind of things. Finally, all of them formed in one media as a learning center which called as conservation field school.



Picture 3. The process of Field Conservation School in Mriyan Vil

This activity is dominated by men in Mriyan village. It consists of 15-20 farmers who active in conservation field school activity. The focus of this field school is looking for alternative solution from some problems especially critical land problem. There are 2 main activities in the process of conservation field school. (1) Understanding vegetative conservative. This activity is varied enough. In the end of 2016, there has been 1.200 plantation planted in the critical land. The types of vegetation are avocado, clove, and sengon. These types of vegetation are chosen because of the productivity and easy, it becomes an alternative solution for farmer's additional income. (2) Understanding civil technique conservation. In understanding civil technique, the activity tends to focus on land manufacture which still considers not appropriate for conservation principle. Almost 20 ha of critical land is not manufacture based on conservation principle. Technique for land manufacture still in the vertical form which means it is not cut hillside. As a result, it cause the land can't keep rain water. Rain water will go to the lower places and can't force to stay in the way it was passed. Hence, it cause the number of erosion is high.

Dynamic process of field conservation school in Mriyan village is interesting enough. For the first time, this school has many participants. However, the number of participant is decrease while the activity is still in the process.²⁵ Therefore, time management becomes the main problem. It because of there is some activities

²⁵ Paulo Freire, *Pedadgogy Of Oppressed*, (Jakarta: LP3ES, 1972), p. 88



followed by the female member since the role of female in Mriyan village is significant. They are not only become a farmer, they also become a housewife that have to take care their family. On the other side, the field school happened at the same time with the period to harvest tobacco. Indeed, this activity will spend more time indirectly for farmer in Mriyan village. It is especially for nature conservation group. Field school still can't be operated routinely because the activity is together with the mutual cooperation for the roads village constriction and they cannot leave this mutual cooperation.

From several evaluations to see the result of field school, it seems that people began to implement self-help by field schools by planting chrysanthemum flowers in their yards to substitute the existing crops on their firm plots. It especially on farm land which categorize as critical land. This is a proof that field conservation school will always give alternative income solution for farmer. Systematic and structurally mentoring will change people's behavior. The previous trauma where people are difficult to organize plant crops because they afraid that it will reduce tobacco income and sowing roses begin to gradually answered by the emergence of chrysanthemum school initiative as part of a conservation field school. A balanced economic need is answered as well as ecological sustainability can also be balanced. It is not harming one of the aspect supports of conservation principle.

If we see from the effect, field conservation school gives several alternative solutions. In economic aspect, chrysanthemum flower commodity of conservation school directly gives some new business choices for farmer. From test land that was done, first step of chrysanthemum flower school, there is still one test land. In the strengthen technique in the second step, farmer begin to be brave to implement on their yard. The amount of adopter is 11 yard of household which uses to cultivate chrysanthemum flower. Economically, it is quiet promising for farmer. One bunch with 10 chrysanthemum flower can reach the price 10,000 - 20,000. It especially when entering to wedding season, school graduation, and Ramadan. The flower demand is high. The size of 15m x 4m chrysanthemum flower land, it can produce 5,000,000 / season. It contrast to vegetable and other commodity in Mriyan villager that almost threatened by monkey attacks. It is not much different from the results of the processing critical land planted with conservation plants, the sidelines of the plant is varied with ginger plants. While waiting for the plants grow large, emponempon plants can be harvested. This addition can reduce household needs. Ginger that is planted in early field conservation school after 6 months, it can be harvested today to supply farmers' income.

D. CONCLUSIONS

The Conservation field school is a form of Mriyan village community participation in managing, maintaining, and protecting Pusur Sub Watershed conservatively. This participation from Mriyan community is actualized in the form of conservation field school, initiative and decision-maker, has an active role in field school (Social Learning), networking (Net Working), and human resources

²⁶ Paulo Freire, *Pendidikan Sebagai Proses Surat – Surat Pedagogis Dengan Para Pendidik Guinea – Bissau,* (Yogyakarta : Pustaka Pelajar, 2008), p. 109



management. Through this things, management will affect to the sustainability of Sub Watershed Pusur, emerging collective institutional between parties to return to care to Sub Watershed Pusur, and encourage all stakeholders in maintaining Sub Watershed Pusur with the conservation principle. Two approaches to conservation field schools have an impact on capacity building and farmers' economic. From conservation side, then it appears chrysanthemum field school. From ecological improvement approach, it emerges conservation field school with the focus on the civil technical and vegetative.

The emergence of conservation field school in Mriyan village seems become an embryo to create management institutional of Pusur river. The institution named "Pusur Institute" will have a role as a bridge for all people who have an interest in conservation Pusur River. The main role is organizing the collaboration between parties from part of Pusur River in upper course, centre, and lower course of the river. This integration system becomes a collaboration model between parties as a collective action. Beside, this forum will increase the participant in building wider networking with the same mission and vision.

REFERENCES

- Agustinova, Danu Eko, 2015, "Memahami Metode Penelitian Kualitatif; Teori & Praktek," Yogyakarta: Calpulis.
- Asdak, Chay, 2014, "Hidrologi dan Pengelolaan Daerah Aliran Sungai," Yogyakarta: Gadjah Mada University Press.
- Bungin, Burhan, 2011, "Metodologi Penelitian Kualitatif," Jakarta: PT. Rajagrafindo Persada.
- Chifamba,O.,2011, "Integrated Watershed Management for Minimizing Land Degradation and Enhancing Livelihoods of Resourches Poor Farmer A Case of Pungwe River Watershed," Zimbabwe, Journal of Sutainabe Development in Africa (Volume 13, No.8, 2011).
- Creswell, John W, 2015, "Penelitian Kualitatif & Desain Riset Memilih Diantara Lima Pendekatan," Yogyakarta: Pustaka Pelajar.
- F. Crabtree, Benyamin dan L. Miller, William, 1992, "Doing Qualitative Research," Sage Publications International Educational and Profesional Publisher: Newbury Park: London.
- Fakih, Mansour, Dkk, 2004, "Pendidikan Populer Panduan Pendidikan Metode Kritis Partisipatoris" Yogyakarta: Insistpress.
- Fakih, Mansour, Dkk, 2010, "Pendidikan Popular: Membangun Kesadaran Kritis," Yogyakarta: Insistpress.
- Freire, Paulo, 1972, "Pedadgogy Of Oppressed," Jakarta: LP3ES
- Freire, Paulo, 2008, "Pendidikan Sebagai Proses Surat Surat Pedagogis Dengan Para Pendidik Guinea – Bissau," Yogyakarta: Pustaka Pelajar.
- Freire, Paulo, 2009, 'Politik Pendidikan Kebudayaan, Kekuasaan, dan Pembebasan." Yogyakarta: READ.



- Ife, Jim dan Tesoriero, Frank, 2014, "Community Development: Alternatif Pengembangan Masyarakat di Era Globalisasi," Yogyakarta: Pustaka Pelajar.
- Johnson, 1973, "A Trainer Guide To Andragogy, Revised Edition, Washinton DC: Departement Of Health And Walfare.
- Kirk, Jerome dan L. Miller, Marc, 1985, "Reability and Validity In Qualitative Research," London: Sage.
- Knowles, Malcolm, 1970, "The Modern Practice Of Adult Education," London: Oxford.
- Koentjaraningrat, 1983, "Metode Metode Penelitian Masyarakat Pengamatan Sebagai Metode Penelitian" Jakarta: Lentera.
- Mardikanto, Totok, 1993, "Penyuluhan Pembangunan Pertanian," Surakarta: Sebelas Maret University Press.
- Mikkelsen, Britha, 'Metode Penelitian Partisipatoris dan Upaya Pemberdayaan Panduan Bagi Praktisi Lapangan," Jakarta: Yayasan Pustaka Obor Indonesia.
- Monografi Desa Mriyan Tahun 2016.
- Mulyana, Deddy, 2001, 'Metodologi Penelitian Kualitatif Paradigma Baru Ilmu Komunikasi Dan Ilmu Sosial Lainnya, 'Bandung: PT. Remaja Rosdakarya.
- Patilima, Hamid, 2007, "Metode Penelitian Kualitatif," Bandung: Alfabeta.
- Salim, Agus, 2006, "Teori & Paradigma Penelitian Sosial Buku Sumber Untuk Penelitian Kualitatif," Yogyakarta: Tiara Wacana.
- Smith, W.A, 1976, "The Maning Of Conscientacao: The Goal Of Paulo Freire's Pedagogy," Amherst: UMASS Center For International Education.
- Suwarto dan Anantanyu, Sapja, 2016, "Improving Land Conservation in Dryland Food Crops Farming In Sub Watershed Upstream Solo, Indonesia," International Journal of Ecology & Development, Vol. 31, Ceser Publications.
- Theresia, Aprillia, Dkk, 2014, "Pengembangan Masyarakat Community Development (Acuan Bagi Praktisi, akademisi, dan Pemerhati Pengembangan Masyarakat,)," UPT. Penerbitan dan Percetakan UNS: Surakarta.

