

Local Wisdom in Governance Natural Resources Management

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Abstract

This study aimed to describe governance based on local wisdom in the management of water resources in some areas in Malang, East Java, Indonesia. Discussions focused on local knowledge as social capital in meeting water needs of society, and society as a form of protection against water resources. Governance in water resource management organizations chosen because it has its own uniqueness in the management of the organization. The study also aims to explore the local values of any underlying organizational governance because in the beginning, the organization managing the water resources to grow with traditional values. To achieve the objectives of this study, the researchers chose to use a qualitative approach. The findings show that the Council consensus and cooperation is the center of the uniqueness of governance based on local wisdom that produces: (1) selection of the orientation of the water resources management institution that emphasizes efforts to maximize the usefulness of water for the people of maximizing profits; (2) still bound water resource management organization with institutional rural communities by promoting the power of social capital, particularly the dimension of trust and patience among residents. Although concomitant change in space, time, mode of organization and human resources, but in substance, the uniqueness of governance by promoting local wisdom still performing well. The role of local wisdom in the governance of water resources to maintain balance and harmony with nature society particularly in efforts to manage water resources in a sustainable manner.

Keywords: local knowledge, governance, natural resources

1. Introduction

Natural resources have an important role in human life. Natural resource for the community not only has economic value but also social significance, cultural and political. The process of formation of civilization in human life can not be separated from the important role of natural resources, so that every cultural and ethnic conception and its own views in managing natural resources.

In general, the shape and status control of natural resources can be divided into four groups: (1) public property, (2) state, (3) private property or individuals, and (4) the commons (Iskandar, 2001). In the natural resources of public property, its ownership status floated, everyone is free and open to obtain benefits. While privately owned resource is a resource that is firmly held by the individual so that other people can not be controlled and set. While the shared resource is a resource that is controlled by a group / community, hence another person or group can not take advantage of these resources without the permission of the group master. In the state-owned resource is a resource that is strictly controlled and controlled by the state.

In practice, the fourth form of control over these resources often overlap and vary, because the form of mastery associated with social and cultural systems as well as the views in which those resources are located. Some ethnic groups in Indonesia are not always considered common property resources has no owner, the resources of this type controlled by an indigenous community or ethnic group. Whatever the form of control over the resources have consequences to society in terms of incentives and interests of the management of these resources. In this context, management of natural resources should take into account the institutional framework in these locations.

In the literature on common property resources, institutional deemed shape human behavior in its relations with resource utilization. Institutional term used here to refer to the organization or authority resource management. Organizations or authorities are defined, by following the North (1990), as governance structures are developed to manage human interaction. Rules and regulations are treated as institutional arrangements. Institutional arrangements often forms the basis for guiding the activities of the organization, although it could be informal nature, and are not associated with any specific organization.

Local regulations in the management of resources in an area is what is meant by local knowledge. Local knowledge has become a social control mechanism to prevent conflicts in resource management. Thus, in the management of resources, particularly shared resources will be two major concepts that influence, namely the perception of management and social control. Perception management is the community perceptions of resources. That is, their use without rules, without limitation, everyone can take advantage of. To give balance, the need for social control in the form of local wisdom.

In addition, in realizing good governance, aspects of trust becomes an important factor when the public is increasingly skeptical about government and politics. Therefore, local wisdom should be strengthened to maintain that trust. In the context of governance, local knowledge is wisdom and noble values contained in the

riches of the local culture.

Resource management based on local wisdom has been supported by the issuance of UU No. 32 Tahun 2009. Solihin and Satria (2007) stated that a solution to overcome problems related to resource management is the provision of management rights to local communities in accordance with the social, economic, political, cultural, and characteristics of their resources.

Local knowledge is a collection of knowledge and ways of thinking that are rooted in the culture of a group of people, which is the result of observations over a long period of time (Babcock 1999 in Arafah 2002). Those definitions are a few key words, namely: knowledge, ideas, values, skills, experience, behavior, and customary usage by the community in a particular region (Keraf, 2002; Ardana, 2005; Aprianto et al, 2008; Mukti, 2010; Yamani, 2011). The knowledge and experience of the community, according to Sunaryo (2003), together with the system of norms, trust, solidarity, justice expressed as a tradition as a result of abstraction and interaction with nature and the surrounding environment over a period of time. Local wisdom, because it is a guideline in attitude and action to meet the needs of people's daily life (Wardhana, 2005).

Generally, local wisdom embodied in its own unique way in the cultural norms in the rituals and traditions of the community. Sartini (2004) explains that the forms of local wisdom in the community can be: values, norms, beliefs, and special rules. The form that these different influences the function of local knowledge to be diverse as well. These functions include: (1) Local knowledge to work for the conservation and preservation of natural resources, (2) Local knowledge serves to develop human resources, (3) Serves as the development of culture and science, (4) Serves as advice, beliefs, literature and abstinence.

Thus, local knowledge is an adaptation strategies that do arise from within the community itself in fixing social problems concerning people's lives. Local knowledge is growing from the interaction between people and their environment.

In the case of water resources management, Pawitan (2011) and Ryadi (2012) revealed that the water resources in Indonesia have been degraded, indicated from the use of excess water, increasing water pollution, as well as the threat of drought in the dry season and floods in the rainy season. Increasingly complex problems with conflicts of interest among stakeholders related to water resources in the area of the upstream and / or downstream, degradation of rivers and lakes as well as soil erosion.

Local knowledge as social capital is very important in the management of water resources in a region. Local knowledge has two main roles, namely: water needs for the life and community life, and maintain a harmonious relationship between the community and the water resources and the surrounding environment. Local knowledge includes five social dimension, namely local knowledge, local culture, local skills, local resources, and local social processes (Aprianto et al, 2008).

Subak is a form of Balinese folk wisdom that regulates rotation and water supply and regulation of cropping patterns. Regulating the use of water is the result of community meetings which are based on the philosophy of Tri Hita Karana. Balinese philosophy emphasizes on the principles of harmony, balance and harmonious relationship among fellow members of the community, the environmental community, and the community with God. Under conditions of limited water, the setting is necessary for all members of society have access to water in the manner and place agreed. One way to regulate water is a period in which the territory Gadon Subak was divided into two groups, namely the period whose turn the water in the rainy season and Gadon group whose turn water in the dry season. While cropping, crop types, and schedule when to plant is determined and agreed upon by the board and members of Subak. (Aprianto et al, 2008; Ardana, 2005; and Sutawan, 2003).

Community wisdom in the management of water resources in Indonesia unfortunately many who have undergone a shift. Demand for water continues to rise with the increase of population (with different types of needs) and development activities to less attention to the preservation of water resources and the environment. The water has now become a problem that needs serious attention because of a decrease in capacity and quality of water resources in most parts of the country.

This paper discusses governance based on local wisdom in the management of water resources in some areas in Malang, East Java, Indonesia. Discussions focused on local knowledge as social capital in meeting water needs of society, and society as a form of protection against water resources. The role of local wisdom in the governance of water resources to maintain balance and harmony with nature society particularly in efforts to manage water resources in a sustainable manner.

2. Method

This study used a qualitative research approach, which is based on the paradigm of interpretive and constructive, very different from the positivist approach as a pillar of quantitative research (Creswell, 2010; Sugiyono, 2010). Furthermore, as part of a qualitative approach, research phenomenology selected by the researchers to be more able to identify the nature of the experience of individuals or communities about particular phenomena (Creswell, 2010; Kuswarno, 2009).

The research object is basically an explanation of the focus and locus of research, the research objectives

are reflected in the topic or title of the study, and is concretely expressed in the formulation of research problems (Bungin, 2008). Thus, the object of this study once the analysis unit includes governance, patterns of interaction with other economic agencies, as well as the rules of the game in the aspect of local wisdom surrounding the management of water resources.

While the study subjects are people who have and understand the information related to the process of land management and administration as well as members / residents of rural communities that have attention or receive benefit from the management of water resources, both as actors directly or through others who understand the object of study. Therefore, this study is the subject of a resource or informant to uncover local wisdom in the management of water resources in Malang.

Malang deliberately selected researchers as the locus of research which is based on considerations that Malang, East Java, is considered a "small portraits" of the region with character rural areas in Indonesia, and historically the existence of the community are very long-established (over 1,251 years ago). While the area of research in this study is the village of Ketindan and Wonorejo in District Lawang village, and the village in the district Gondowangi Wagir determined with consideration have a principal business activities such as procurement and distribution of clean water.

In a phenomenological study, the selection of data sources (participants or informants) is crucial (Bungin 2008; Kuswarno, 2009), given the informants are better able to articulate the experience and views related to the things that are asked and explored researchers. Therefore, interviews were conducted to actors or ever manage water resources, and stakeholders kepentingandalam management of water resources as a potential informant. Given the many sources of qualified candidates for the informant, this study establishes the village head as an informant as the entrance to the informants next. The considerations that the village head as a central actor in the village. Furthermore, the management of water resources, rural community leaders following ordinary citizens, can even confirm to anyone who has the competence and capacity of the focus of this study.

Considering the research data obtained in the form of qualitative data in this study using data analysis model of Miles and Huberman (1992) through the activity / process called encoding. The analysis model is done in three (3) activities, and can take place in palalel, with a brief explanation, namely: (1) Data reduction: process of sorting, selecting, focusing, simplification, abstraction, and transform raw data have been obtained from the data collection process in the field; (2) The presentation of the data, by drafting a set of information that allows drawing conclusions and making recommendations of data; (3) The conclusions-conclusions that have been drawn, then verified during the study. Verification in the form of reviews or rethinking the record field results that may be fleeting or have been time consuming, as well as exchange ideas (discussion) with the informant to develop meaning. Meanings that emerge from the data need to be tested its validity by means of triangulation (including credibility test data through triangulation of data sources) in order to form its validity. these activities not be partial, but interrelated, simultaneous and continuous so that it becomes a cycle (interactive model).

3. Findings and Discussion

The three organizations studied rural communities are engaged in the supply and distribution of clean water daily in order to meet customers. The supply of raw water comes from springs in the environment around the village. For water distribution, the three organizations managing the water resources using gravity and electric pumps. This is because the topography is hilly area and some of the residents or customers to stay higher than in the water source.

Design of water resource management organization studied is not only to manage water as a commodity which tends rare. Rationality over the choice of organizational form of the management of water resources intended to build an organization that productive (profitable), and independent (independent or free from power) as an effort to improve and perfect public management. It is still consistent with rational choice theory (Williams and Fedorowicz, 2012), as well as institutional forms as social businesses by Yunus (2011) only has 2 types, but specific to the management organization of water appears as a social business type 3 (as a combination of the type 1 with type 2).

In the system of management of water resources, was the organization manage the water resources is an effort to provide clean water for villagers institutions aimed to improve people's lives and the community level together with village government are "self-managed". Meaning that self-management is to promote the spirit of mutual cooperation which is based on a sense of togetherness of the villagers, and commitment to realize life is better with emphasis on common interests. This is in line with the opinion / research Vel (2010), and Williams and Fedorowicz (2012), and the results proved to be "powerful moment" when the organization that manages the water resources faced with the issue of the funding requirements for the development of utility networks.

Findings 1: governance of water resources tend to be communities with the advanced rationality based groups and social capital.

In the perspective of water management as a resource that is classified as restricted, then the individual as well as members of rural communities faced with the choice of an alternative accept rate adjustment (price of

water) as the implications of the market mechanism, or alternatively take action, both individually and communal impact on expediency together. Concrete, water harvesting is done by: (1) saving and patient, so that other communities can also enjoy, (2) using clean water according to mutual agreement, namely water for human needs first, and livestock and further crop, (3) conduct mutual cooperation to "fight" option to raise water rates in order to repay the loan.

Attitudes and behaviors patient, saving, mutual trust to take advantage of limited fresh water is a few dimensions and applications of social capital. The social capital is intended as an answer to the management of limited water resources to be used together.

Findings 2: Management of public relations managers and users of water resources is based on motivation and non-material orientation.

Motivation manager of water resources do not always based on financial interests. That is, with the incentive of becoming caretaker or employee is financially inadequate, still have high dedication and loyalty to the execution of tasks to users of water. It is based on considerations of non-material, the orientation of the role (role) of social and functional alone. Concretely, that an administrator who does not have a background in despicable behavior, have a great chance of success (Wallis, et al., 2004). Besides the response from the public to the management of water resources as well as a form of social capital in the form of a positive appreciation, so that its staff can continue. The promotion back to the pattern of social capital management and staffing in order to be effective rural poverty reduction (Abdul-Hakim, et al., 2010).

Findings 3: Implementation of regulatory and institutional manifestations adapted to local needs and potential in each village in order to realize the improvement of social welfare.

Development of Water Supply System, has been given the authority and responsibility for management of water resources to the Village Government to organize, assign, and grant permits for the allotment, provision, use and exploitation of water resources. This has implications for the pattern of water resource management that aims to better ensure the protection of the interests of the community (village), which economically is still classified as weak to be neglected. However, in the Malang District Regulation No. 4 of 2009 is, to interpret and express the general provision that the entities whether incorporated or not incorporated as a business entity to manage groundwater in Malang. It is slightly open "opportunity" for the management of community-based water resources to manage ground water intended for the welfare of the people in a sustainable manner. In addition, the institutional village drinking water supply as a system that for the sake of effectiveness, efficiency, quality, and order management of water resources, the village still has a strategic role. This role is related to the facilitation of community groups to meet the water needs of society, and the existing availability of water, as well as consider the interests of other villages.

Findings 4: Setting incentives and dis-incentives by the Government or Local Government to the management of water resources, has not fully support the system of management of water resources.

In an effort to accelerate the supply of drinking water for people living in rural areas it is responsible in the control and operation of water resources. These responsibilities as well as the anticipation of a response to a new perspective of the water, ie water as an economic good which allows the commercialization and privatization of water. Meaning, individual ownership over water be justified according to the understanding of property rights over water, and also put the water as exclusive items that can be monopolized by a group of people or individuals. This understanding of course different views of water rights that is based on that water as a human right. As for human rights, then the water is inclusive, and can not be monopolized by a group of people or individuals. Therefore, the interference of the state (in this case the Government and Local Government / village) to guarantee the right of every person to obtain water for their basic needs minimal daily to meet life healthy, clean, and productive, as well as to solve the problem of externalities (Gregory and Stuart, 1998).

Given the rules or regulations, even the state constitution has insisted that the point that water resources controlled by the state and utilized for the welfare of the people, then the control and operation of water resources by the Government and / or local government (provincial, district / city). While the rights, powers, and responsibilities of village government according to the regulations in the development of water supply systems, namely: (1). facilitate and permit public participation at the level of the group / community in its territory; (2). monitoring the utilization of water resources for drinking water supply at the level of the group / community; and (3). report the results of monitoring the utilization of water resources for drinking water supply in the region to the district / city.

With the right, authority, and responsibility, shows that the role of the village government only as a regulator and supervision only, and not as an operator (active) in order to avoid imbalances between water availability tends to decrease, and the needs and demand for water is increasing. The division of authority and responsibilities among different levels of government are already there, namely between central government, local government, and the village government. However, to manage the water resources that type of business engaged in the provision of drinking water for the village, completely untouched facilities or support financially. Even emik, administrators who manage water resources was only fulfill licensing obligations and / or payment of the tax

burden. Furthermore the utilization of community resources to address the deterioration of water quality seems still untouched.

Rationality over the choice of the form of the institution managing the water resources will aim to build an organization that is productive (profitable) and independent (independent / free of power) as an effort to improve and perfect public management, and appears as a reaction to the criticism of the bureaucratic model of Weberian (Osborne and Gaebler, 1996). In water resource management organization exists decentralization of power to the bottom and a separate structure that is management, standard operating procedures are elastic, their creativity and innovation, clear hierarchies of power, as well as staffing and management system that is more competitive and open.

However, the organization managing the water resources are facing an internal problem (conflict management and objection / protest of customers), it turns back to "influence" the governing elite of the village as been reviewed by Shepherd (in Dharmawan, 2006; Ellis and Biggs in Yustika 2012) , It can be seen from the fact that the organization's research manager of water resources that legally choose progressive tariff scheme, as the concept of classical economics / neoclassical to pricing water or consumption costs. On the other hand, in other locations prefer the gotong-royong to determine water rates. Meaning, people in the village believe that the study measured rates or the price of a sum of money as a symbol of materialism to the economic concept of classical / neoclassical, not a model of incentives or disincentives are most effective for maintaining the benefit of clean water. But with the mutual cooperation activities in the community, or with patience and savers, as well as mutual understanding of the villagers to use water, it further enhances the benefits of clean water, and most importantly, do not lower the water utility for the customer / other villagers. That is, the behavior of mutual cooperation, patience or savers, as well as mutual trust and confidence among the villagers is a form of social capital, as well as the "resistance" of the instrument price (raising rates).

The decision to require a specific thing as caretaker manager of water resources on the basis of consideration of local potentials in each village. That is, the choice of form / structure of water resource management organization based thinking reinventing government or with the type of Weberian bureaucracy that is reflected in the standard operating procedures, creativity and innovation, as well as the power level of its personnel system. In the management of water resources, is an effort to provide clean water for villagers who aimed to improve people's lives at the community level with the government of the village as a "self-managed". Meaning that self-management is to promote the spirit of mutual cooperation which is based on a sense of togetherness villagers, commitment to realize life is better with emphasis on common interests. It proved to be "powerful moment" when faced with the issue of the funding requirements for the development of utility networks. In fact, if it adopts the ideas of the classical / neoclassical is only by raising the tariff (price of water) so that the funding needs can be satisfied, and can make a profit (profit) for optimally managing organization (Skousen, 2006).

The condition shows that the orientation of the manager of water resources is still bound by their local wisdom, namely maximizing the benefit of clean water for villagers. Thus, the institutional organization that manages the water resources refers to utility maximization as the goal, rather than profit maximization.

This reality shows that local knowledge society in the governance of water resources is able to withstand the shifting of the orientation of the value of water and natural resources, namely the social dimension to the economic dimension. Water which was originally used as a 'free' in the absence of compensation, it has economic value and the higher this value over time. Commercialization of water to grow and evolve as more and more volume of water required by the community and the variety of types of demand for these resources. This condition mainly occurs as water resources become more limited, and conversely demand for water is high. Value of local wisdom in the governance of water resources management are still awake shows still eksisnya traditional institutions in the management of water-based 'values and traditions' in the community combined with live harmony with the surrounding nature.

4. Conclusion

The results of this study indicate that one of the values of local wisdom that evolved and is still implemented in the management of water resources is a value consensus and cooperation. It serves nurturing consensus customs, making the rules villages, communities and share their aspirations. So it is with the values of local wisdom to manage water resources are the values that are considered good and noble contained in the richness of the local culture that developed in the community and can be used for the development of the governance of water resources management is good.

Consensus and cooperation are central uniqueness of governance that produces: (1) selection of the orientation of the water resources management institution that emphasizes efforts to maximize the usefulness of water for the people of maximizing profits; (2) are still dependent organizations managing the water resources with the village community institutions concerned with promoting the power of social capital, particularly the dimension of trust and patience among residents.

Thus governance based on local wisdom to be able to synergize government, private, and community that

puts local values as the basic principle in governance. Therefore, the recommendations offered are; (1) internalization and institutionalization of value-nilai lokal wisdom needs to be done in public life; (2) interpret the manager of water resources in the context of common property resources as organizations seek to improve services according to the needs and character of the local community; (3) the rule of the institutional organization of water resource managers need to be simplified and harmonized with the essence of the village as a unit of community has the authority to regulate and manage the interests of local communities, based on the origin, and local customs that must be recognized and respected.

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