

Capital, Strategy and Social Network of River Restoration Movement

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Abstract. Capital, strategy, and social network are the main properties of river restoration movement. The movement activists should have the three properties to be a means of restoring the condition of polluted and degraded rivers. Through theoretical convergence of environmental network and Clare Saunders' social movement theory, this case study research aims to analyze capital, strategy and form of social network the actors of river restoration movement have. The subjects of research were key actors of Winongo Asri River Community (FKWA) in Yogyakarta selected using snow ball technique with participant observation, in-depth interview and documentation methods. Source and research method triangulations were used to validate the data. Data analysis was conducted through data reduction, data display and conclusion drawing. The result shows that individual and symbolic capitals contribute not only to expanding the coverage of movement but also to creating typical social capital. The strategy using social capital to realize the movement's objective is implemented structurally and culturally. Capital managing ability and movement strategy can result in social network forms that are important to a sustainable river restoration movement.

Keywords: Capital, strategy, social network, river restoration movements.

1 Introduction

The river restoration movement is a manifestation of increased public understanding on the problem of river pollution and degradation. This movement was strengthened by the birth of several environmental organizations receiving political support to be involved and to participate actively in the environmental restoration process. Global political support is also visible in agreements between countries through the establishment of the UN's Decade on Ecosystem Restoration aiming to enable urban areas to adapt to the impacts of climate change [1]. The river restoration movement has also been designated as one of the supporting pillars of the Sustainable Development Goals (SDGs) to realize a clean environmental arrangement, a maintained ecosystem and clean air and water quality [2]. It is a series of social and political contexts strengthening various efforts and initiatives of river restoration movements in various countries.

As a variant of the environmental movement, the river restoration movement began in the mid-20th century in several countries such as Great Britain, America, Canada, Europe and then began to develop in several African and Asian countries [3]. The story of popular river restoration movement in America occurred on the Kissimmee River, spearheaded by The Sierra Club [4]; the Bronx River by The Bronx River Alliance [5] and the Elwha River by the Friends of the Earth and American Rivers Group [6]. Civil society actors are also widely seen in several Asian countries in, for example, the environmental group "Love Mae Ping River Group" in Thailand which working to restore the degraded Ping River [7]. Meanwhile, the movement to restore the Pak Moon River was mobilized by The Poor People's Assembly which protested against the construction of a dam for electricity infrastructure because it was considered to have damaged the river ecosystem [8]. In Japan, the Asaza NGO mobilized residents around Lake Kasumigaura by improving the lakeside ecosystem and local NGOs in Ikazaki developed an environment-friendly and sustainable Oda River Management scheme [9]. Civil society actors continue to move not only to encourage policy changes at the state level but also to give environmental education and awareness at the community level.

The emergence of civil society actors is increasingly strengthening with the birth of international organizations that care about and work on river damage issues. For example, International Rivers has been networking in Asia, Africa and Latin America since 1985 and has become the heart of global movement to ensure that the voice of society depending on rivers is heard, and their rights are respected (Internationalrivers.org). The International River Network (IRN) was also created to protect rivers and defend the rights of people depending on them (www.irm.org). Apart from that, in Europe, European Center for River Restoration (ECRR) emerged, which contains an information network about the practices of the restoration movement in Europe and Asian River Restoration Network (ARRN), which is a non-participant organization for various knowledge and experiences (River restoration in Asia) [10]. Also, the expanding network of river restoration movements has expanded similar movements in various countries, including Indonesia.

The river restoration movement in Indonesia has emerged since Citarum River was called as one of the most polluted rivers in the world [11]. Through a number of multi-party programs and funding schemes, the movement to restore the Citarum River has also involved the World Bank, ADB, and a number of civil society organizations living along the river since 2007 [12]. Since then, a number of rivers in Indonesia have begun to receive attention through the Healthy River Project (Clean River Project), City Settlement Improvement Project (City Settlement Environmental Health Project), and Environmental Health and Settlement Improvement Project as a series of government projects in an effort to improve a sustainable physical, biological, and social environment for people living in slums and wild areas along city rivers [13]. Community engagement in the form of communities and other civil society organizations also colors various efforts to restore rivers [11].

Efforts to involve the community in the river restoration movement appear dynamically following regional autonomy. The Yogyakarta City Government established several river community associations connecting villages crossed by the river to each other. One of these associations is the Winongo Asri Communication Forum (FKWA) currently still plays an active role in the river restoration movement in the Winongo river area. FKWA's ability to carry out its actions cannot be separated from its ability to empower capital, develop strategies

and build social networks between actors. These three factors are important to ensure the sustainability of river restoration movement.

This research has three objectives. The first and the second objectives are to explore and to explain the forms of capital, strategies and social networks having been developed by FKWA in the context of river restoration movement; and the third is to analyze the extent to which the capitals, the strategies and the social networks formed play a role in maintaining the sustainability of river restoration movement. Claire Saunders' theoretical convergence approach to environmental movement networks is used to frame and analyze the role of movement resource mobilization, political opportunity structures and social networks [12]. This approach is relevant to describe and explain more actually and comprehensively.

2 Methodology

The research method used is a case study focusing on empirical cases and analysis on certain cases, either single case or multiple cases [16]. In general, the characteristics of case study research include: (1) investigation and analysis on an example or a variant of some limited social phenomenon; (2) striving to produce rich, detailed, and in-depth elaborations of the phenomena studied; and (3) using triangulation of various methods or procedures, not limited to qualitative techniques [13].

The research was conducted at the Winongo Asri Communication Forum (FKWA) in Yogyakarta City for two specific reasons. Firstly, the track record of participatory settlement planning movements along the Winongo River has shaped their identity as civil society actors who care about the river. Secondly, Fatwa's ability to utilize its resources has reached achievements and movement results that can be enjoyed and felt by riverbank residents. Primary and secondary data were organized through in-depth interviews and participant observation using unstructured research question instruments for FKWA actors determined by purposive sampling. The source triangulation process is carried out to obtain valid results. Data analysis was carried out thematically through an interpretation process, in which data was collected and searched systematically to identify patterns in the data to provide an enlightening description of the phenomenon. This process results in the development of meaningful themes without producing a theory explicitly [14]. Thematic analysis can provide many benefits and deep understanding on complex phenomena, be applied to various areas of theoretical and epistemological approaches, and expand or test existing theories [15].

3 Results and Discussion

Forum Komunikasi Winongo Asri (FKWA) originates from Kelompok Belajar Masyarakat (KBM) under Endang Rohjiani's leadership to free women in Badran Village from illiteracy and empower them economically. Flood events which always bring rubbish into their homes encourage KBM activists to manage this rubbish into economic value. It was at this point that residents' ecological awareness of their rivers began to emerge.

Their activism began to develop into a village clean-up movement and became a routine village agenda. The City of Yogyakarta had a Mayor who was aggressively establishing waste

banks in villages until 2008, especially those adjacent directly to rivers. In mid-2008, the Yogyakarta City Government merged all waste banks into Jati Polah (Yogyakarta City Waste Management Community Network). The opportunity of developing networks with various parties was opened widely until one day the Lintas Winongo Waste Bank collaborated with the Water Resources Service moving to organize the Winongo River area the water quality of which was declining. Not only is there a lot of rubbish piling up on the banks of the river, polluting the river water, but also the people in a number of points in the Notoprajan and Sudagaran areas still have many pig farms. This worsened the water status of Winongo river. Due to this condition, along with the Yogyakarta City Bappeda, we gathered the actors along the Winongo River, especially RT, RW, Subdistrict, and LPMK as well as the waste bank across Winongo. Referring to this process, it can be said that although FKWA was formed through the process of transforming a waste bank into a river-caring community, the political opportunity structure became an important momentum to unite the commitment and spirit of various villages on the banks of the Winongo River.

Actors along the Winongo River are also enthusiastic because the cross-Winongo waste bank movement is considered quite successful in playing its role in reducing rubbish in the village and the river. Support from RT, RW, and Kelurahan also poured in to encourage the formation of a community that cares about the village and the Winongo River. It was due to the facilitation role of Bappeda through Haryadi Suyuti that the Winongo Asri Communication Forum (FKWA) was formed and inaugurated by the Mayor on August 17 2009 in Serangan. Since then, an agreement has been established with Bappeda that everything related to Winongo River affairs must involve FKWA. The following is an excerpt from an interview about the process of establishing FKWA which shows how strong the city government's commitment is to knitting together community networks.

3.1 Organizing Capital

FKWA has some capital mobilized to resource the river restoration movement. Capital can be sourced from the capacity and ability of movement actors, the availability of political opportunities and the support of riverbank residents. The capacity and ability of movement actors can be traced through their experience organizing riverbank residents to manage their waste so that it is not thrown into the river. The process of building awareness about the importance of caring for rivers and conducting campaigns to make rivers free of waste was carried out before FKWA was formed. A long process involving various groups of riverbank residents can be considered as an investment of resources to benefit from the results of social relations having been carried out. This is relevant to the understanding of social capital emphasizing social relations in the form of access to resources inherent in social networks [16].

The activeness of the FKWA river community in the M3K movement is inseparable from the organizing process at the Lintas Winongo Waste Bank, having been carried out since 2007. This has provided important social capital for FKWA actors to move at the community level. The process of building communication is no longer done from scratch, but the "trust" that was built beforehand makes the process of discussion and exchange of opinions easier and convinces the residents that M3K is a common need. Likewise, the social network developed with the city government at the Lintas Winongo Waste Bank also facilitates the lobbying and dialogue processes. This multi-layered process is embodied in Musrenbang at the sub-district

level, which considers river issues in the regional development process. Thus, the M3K program is integrated into and accommodated in the planning scheme at the sub-district level.

M3K becomes important in the context of the FKWA node movement. Not only is there a "trade mark" attached to giving the name M3K to the FKWA node, but the problem of slum settlements on riverbanks, which trigger pollution and are vulnerable to flood disasters, can also be improved slowly. In addition to emerging from the idea of the FKWA node, M3K aims to organize riverbank community settlements by means of community houses being set back, raised, and facing the Winongo river. Besides, M3K aims to minimize the occurrence of flood disasters and casualties during the rainy season. With the Winongo river environment still being natural, the Winongo river can also be used as a natural tourist spot as a means of recreation for the community around the Winongo river itself. The Mundur Mungah Madhep Kali (M3K) program is one factor in the realization of river-based Winongo tourism, providing space for the development of community recreation areas and provides road access for the community.

The position of social capital in the context of social movements can be both a driving and inhibiting factor. Community social networks formed through volunteer actions tend to occur within the scope of friends, family, colleagues and neighbors [17]. Frequent interactions between these spheres allow for a sense of solidarity in turn making the actors willing to respond and be called upon in volunteer actions. This is reinforced by Putnam's social capital thesis arguing that participation in volunteer activity gives individuals social skills and by engendering trust in others interpersonally increases the likelihood of future civic involvement [18]. Thus, the process of social micro-mobilization serves as one explanation that the wider one's social network and the greater the number of different groups one belongs to, the higher will be the likelihood of volunteering.

3.2 Developing Action and Strategy

There are some forms of action and strategies developed by FKWA: ecological restoration strategies and cultural restoration. Ecological restoration refers to the aim of restoring the ecological function of rivers through improving the morphological, physiological and ecosystem conditions of rivers. There are several forms of restoration actions that can be categorized into this action: river cleanup action, river border rescue and settlement improvement on river banks. River clean action is a form of river ecological physical restoration action that has always been present since the beginning of the movement until today. In the early days of river restoration movement, river cleaning action was a form of response of the residents living on the banks of the river to the water that could not flow properly because the rivers were full of garbage and household waste. Then, the residents on the banks of the river went down to the river to clean it spontaneously and voluntarily so that flooding no longer occurred and disturbed the comfort of residents. In relation to the context of social movements, the volunteer actions carried out by these residents are part of an effort to contribute to social and environmental change. The volunteer actions carried out are also loose and informal. As mentioned by Eliasoph, uninstitutionalized and informal volunteerism is also an inherent political act [19].

Another ecological action is the rescue of river boundaries. The efforts to save river border areas are not only based on the importance of providing adequate ecological space for rivers, but also a part of the urban development interests. To the rivers, the ecological space existing

is when the river is not only connoted as a flow of water, but also as an ecosystem that becomes a space where flora and fauna can grow. The river border becomes a water catchment space, so it does not rely on the river body as the only space for water flow. The river is also a space for plants to grow to create a microclimate along the river flow, including space for fish to breed [3]. Thus, the availability of river boundary space is important to ensure the sustainability of the river as an ecosystem. Furthermore, the action was continued with the arrangement of settlements on the banks of the river through the M3K program (Mundur, Mungah and Madhep Kali).

The M3K program has been realized in 7 sub-districts only along the riverbanks: Bener, Kricak, Bumijo, Pringgokusuman, Ngampilan, Patangpuluhan, Pakuncen, and Gedongkiwo. Through support from the Public Works and Housing Department for Residential Areas (DPUPKP) and the Environmental Service, the M3K movement keeps rolled out in stages. A number of obstacles were encountered, including the limitations and unpreparedness of a group of people to participate in this program. This limitation concerns financing and community self-help, which are not easy to collect because they require willingness. Apart from that, this unpreparedness is related to the residents' low awareness of disaster mitigation. These two reasons are considered to be the main obstacles for FKWA nodes to be integrated into all riverbank areas.

Even though a number of sub-districts have not been able to participate in this program, areas that have participated in M3K have experienced better benefits than before. The main benefit felt is that people feel comfortable in an environment that is no longer dirty. The cultural mindset of the community has changed so that they no longer throw domestic waste into Winongo River. Thus, the natural sustainability of Winongo River is maintained and no longer polluted. Apart from that, the community settlements along the river look beautiful and natural. This situation, of course, will be one of the attractions for the efforts to realize Winongo Wisataku 2030. The construction of comfortable green open spaces is also an important part of efforts to fulfill the needs of residents to live in a comfortable, decent and comfortable place. In addition to trying to restore the function of river ecosystems, M3K is also a way of fulfilling the residents' rights to live safely from disasters.

Sociocultural restoration refers to the framework of understanding that river pollution and degradation occur due to human activities and behavior. There are two important actions and strategies that have been carried out by FKWA: namely the river school and the implementation of the Memetri Kali Winongo Traditional Ceremony. River schools are knowledge transformation efforts that seek to change community behavior towards rivers and encourage movements or actions to save the rivers [20]. In the global context, river schools can be seen as the embodiment of SDGs goals, especially number 14, namely conserving and making sustainable use of marine and ocean resources for sustainable development [25]. River School serves not only as a learning medium for the community but also as an effort to increase public knowledge and awareness about environmental issues. The river school format is built in a certain ecosystem so as to provide opportunities for the younger generation to go into the field (field study). The experience of direct contact with the river can strengthen the relationship between humans and nature. Therefore, human multisensory closeness to humans must always be built as a condition and strategic foundation for achieving sustainable development [25]. The rationalization is that river schools can be viewed as an effective and

strategic way to prepare communities and the environment for water crises. Therefore, mutually symbiotic relationships need to be built to result in a safe environment.

Another important cultural movement in this node is Memetri Kali Winongo, which is implemented fully by the community both as actors and as organizing committees, especially the villages in segment 5 of Kali Winongo. This activity is also supported by the city government and the Winongo Asri Communication Forum (FKWA), as well as arts and culture groups, especially those in the villages along the Winongo River in Yogyakarta. The activities supporting this festival are jenang festival as an expression of gratitude; boat building competitions for children; arts performances; and eco-mapping network schools. Eco-mapping is a method helping identify and analyze the environmental conditions. In this way, residents can carry out mapping related to waste, energy, and water in a participatory manner, including identifying the potential and the strengths of village to create regional planning.

Another cultural strategy being implemented by this node is to empower riverbank communities with developing magot. In 2021, the percentage composition of food waste in Indonesia will reach 40.26%. The city of Yogyakarta actually has a greater percentage of food waste, namely 53.51% (<https://sipsn.menlhk.go.id/sipsn/>). So far, leftover food waste will be put into biopore holes to be processed into compost, but due to limited land in urban areas, biopore ownership is very limited. As a result, this waste will be mixed with other types of waste and thrown into TPS (garbage dump) or TPA (landfill), causing a number of environmental problems, especially when the rainy season comes. It is not uncommon for food waste to be thrown into rivers, speeding up the river sedimentation process and making it vulnerable to flooding. This condition is a common challenge needing to be addressed at its root.

3.3 Connecting Social Networks

The FKWA node has established collaboration and cooperation with various parties: civil society, government and universities. The latest collaboration with civil society is carried out with USC Satunama through a village mapping program adjacent to the Winongo river basin to build an integrative action framework. In this context of cooperation, the FKWA node plays an equal role as a partner. It is different from the cooperation established with universities and government. Cooperation with universities generally revolves around research activities and community service, so that the FKWA node acts as a supporting program and has low bargaining power. Similarly, in the cooperation with the Government, the position of the FKWA node also tends to be the implementer of programs with weak bargaining power. Even in certain situations, the FKWA node actually becomes an extension of the government as well as a mediator of social conflicts between residents as a consequence of the river restoration movement. This condition puts the FKWA node onto a two-legged position, involving the government and the community and therefore emphasizing its role as a Bridging Actor. The role of bridging actors in networking practices is common when capital and resource capacity between node members are uneven. The presence of this role can be seen as an initial stage in the practice of networking while developing movement resources to be equal so that an interaction to establish relationships can be carried out directly. This is possible if the developed movement network is to share a common space to develop movement schemes and tactics.

Globalization has encouraged the formation of a networked society and an information society so as to produce new configurations in society. This is increasingly becoming a necessity when new communication technologies emerge in the form of the internet, email and the presence of cellular phones that accelerate change. The role of communication mediated by technology is growing rapidly and provides the opportunity for the growth of new virtual forms of social organization [26] . Explicitly, Mario Diani (2010) even clarifies the possible effects of communication mediated through technology on social movement activities both in instrumental and symbolic forms to increase communication effectiveness and create collective identity and solidarity [27]. The potential consequences of the presence of communication technology also intervene in the formation of a network of river restoration movements.

4 Conclusion

Capital, strategy and social networks play an important position in the river restoration movement. Social capital and institutional capacity provide an important foundation for organizing movement actors to build mutual trust to build cooperation and coalitions. The ability of empowering social capital and institutional capacity is a crucial part in the mobilization of resources and means to obtain support from various parties. The actions and strategies of the FKWA movement are realized through ecological and sociocultural restoration approaches. Both approaches have urgency in the arena of improving river ecosystems and transforming knowledge to various community groups about the importance of rivers as a support for human survival. Capital and movement strategies become trajectories of interaction between diverse actors and the cement for the construction of social networks of river restoration movements. The trilogy of capital, strategy and social networks is a complementary and supportive instrument for the sustainability of river restoration movement.

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