

THE STRENGTH OF SOCIAL CAPITAL OF THE SEKAT BAKAU GROUP IN THE CONSERVATION OF MANGROVE ECOSYSTEMS IN BURUK BAKUL VILLAGE, BUKIT BATU DISTRICT, BENGKALIS REGENCY

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ABSTRACT

The damage to the mangrove ecosystem on the coast of Riau, especially in Buruk Bakul Village, which experiences 4 meters of erosion each year, has become a serious environmental problem due to abrasion and land conversion. In response to these conditions, the local community formed the Sekat Bakau Group which focuses on self-help mangrove conservation. This study aims to analyze the typology of the group's social capital in carrying out its conservation role. The approach used is qualitative descriptive, with data collection techniques in the form of observation, in-depth interviews, and documentation. The results of the study indicate that social capital is a strong bond for carrying out conservation actions, consisting of elements of social networks, trust, norms, recognition and proactive actions. The five elements have formed a circle of relationships in the typology of bonding, bridging and linking social capital. The social capital possessed is able to drive conservation actions even though the group has limited economic capital. The results of this study also show the typology of the Sekat Bakau Group's social capital in preserving the mangrove ecosystem, which at the bonding level shows strong internal group membership, at the bridging level there are ties with the community, village government and other conservation groups and at the linking level there are ties and assistance from partners.

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INTRODUCTIONS

The damage to Indonesia's coastal environment is increasingly worrying, especially related to the loss of mangrove ecosystems that play an important role as coastal protectors. The problem of abrasion and mangrove damage has become a serious concern in various coastal areas of Indonesia. This condition is even more concerning because the mangrove ecosystem that should be a natural fortress to prevent abrasion is now decreasing and losing its function in handling abrasion disasters, resulting in flooding and the disappearance of part of the land as well as coastal erosion due to sea waves (Arifanti et al, 2021). Based on data from the Global Mangrove Alliance in 2022, the situation of the

world's mangrove ecosystems shows alarming conditions. Over the past 20 years, the world's mangrove ecosystems have disappeared 3-5 times faster than global forest loss. It can be seen from the loss of more than 60% of mangrove areas or degraded to date with an additional loss of 1% per year (Global Mangrove Alliance, 2022). Indonesia, as the country with the longest coastline, faces a major challenge in preserving mangroves. Riau Province as the region with the largest mangrove population on the island of Sumatra has experienced a significant decrease in area area.

Referring to the Riau Provincial Environment and Forestry Service in 2022, Riau Province is the most mangrove-populated area on the island of Sumatra with an area of 224,895 hectares, which has decreased from the last 15 years (DLHK Riau Province, 2022). Riau Province in 2007 had a mangrove area of 234,500 hectares, but due to the damage that occurred continuously recorded in 2 decades, it has decreased by 14.8 thousand hectares or equivalent to 39% of mangrove loss (PPDI Riau Province, 2022). Bengkalis Regency is one of the areas with a high rate of mangrove damage in Riau Province. Of the total mangrove area owned by Riau Province, Bengkalis Regency is among the 3rd largest areas with a high rate of mangrove damage, which has an area of 33,016 hectares spread along the coast and land (Bengkalis P. P, 2015). Buruk Bakul Village in Bukit Batu District is one of the real examples of the problem of damage to the mangrove ecosystem. The condition of the mangrove area in Buruk Bakul Village is very concerning. The mangrove area of Buruk Bakul Village has an area of 168 hectares, where this area has experienced an average abrasion of 4 meters per year along 139 meters of coastline since 1991 (Yayasan Gambut, 2023).

The level of abrasion that occurred hit the land with an erosion rate of more than 10 meters per year which occurred along the coast including Putri Tujuh Hamlet and Lubuk Raja Hamlet. This has an impact on the extinction of mangrove potential, the catch of fishermen, both shrimp and fish, the destruction of water ecosystems, the thinning of coastal areas and even has an impact on the destruction of community-owned land with the erosion of land of 1-2 rows located about 500 meters from the coast. In response to the worsening environmental damage, a local community movement has emerged that cares about the preservation of mangroves. So that from the environmental problems that have occurred, a community group has emerged and a community group called the "Sekat Bakau Group" has emerged with the aim of maintaining and preserving the mangrove ecosystem of Buruk Bakul Village. This group was formed in 2019 on the basis of collective awareness by a group of people consisting of 3 people, namely Angah (pak khaidir), pak Damhuri and pak Selamat.

The conservation activities carried out by the Sekat Bakau Group are very diverse and carried out consistently. Members of the Sekat Bakau Group work together to plant mangroves after work, both after fishing, building work and gardening. Conducting a group discussion agenda once a month to discuss programs and continued efforts in the preservation of mangrove ecosystems and holding events in the form of small competitions using joint venture funds between group members to increase the enthusiasm and solidarity of the group. The togetherness and solidarity built in this group is in line with the concept of solidarity put forward by Emile Durkheim. This is in line with Emile Durkheim's idea of mechanical solidarity, which is a shared consciousness that encourages solidarity in a community group (Ritzer, 2004). Through this joint celebration, group members increasingly feel attached to each other and have a common goal, which is to preserve their mangrove ecosystem and environment (Muntasib et al, 2017). The Sekat Bakau Group also faces various challenges in carrying out its mission. The Sekat Bakau Group uses makeshift planting techniques because they still have limited knowledge about mangrove management and rescue so that they often have the opportunity to fail to be eroded by the waves. Despite all the limitations, this group is still persistent in making conservation efforts by inviting various parties to join the preservation movement.

Based on the phenomenon in the field, it is known that the main problem of the Sekat Bakau Group is their ability to survive and be active despite facing limited resources. Referring to *das sein* (in fact) and *sollen* (hope) in the Sekat Bakau Group, the group should be constrained and stop carrying out its actions because it has limited capital, but in fact the group is still active continuously in carrying out conservation actions until now. This shows that there is a power of social capital that plays a key driver in the mangrove ecosystem preservation movement. The power of social capital includes various elements such as social networks, trusts, norms, recognition and proactive actions that are interrelated and reinforce each other. Based on the background of the problems that have been described, this study aims to analyze the typology and social capital barriers of the Sekat Bakau Group in the conservation of mangrove

ecosystems in Buruk Bakul Village, Bukit Batu District, Bengkalis Regency. This research is expected to provide an in-depth understanding of the characteristics and dynamics of social capital that are a force in carrying out conservation actions, as well as contribute to the development of community-based mangrove ecosystem preservation strategies.

RESEARCH METHODS

The determination of the research location uses a purposive method approach by considering the existence of social phenomena that are relevant to the focus of the study. The location chosen was Buruk Bakul Village, Bukit Batu District, Bengkalis Regency, Riau Province. The selection of the location is based on the consideration that there are community groups that consistently and actively conserve mangroves independently and voluntarily by prioritizing the group's internal strength in the midst of limited capital ownership. This research uses a qualitative descriptive method with an emphasis on the aspect of in-depth understanding of the research object in accordance with the actual conditions in the field.

The determination of research informants uses purposive sampling techniques by setting certain criteria that are in accordance with the research objectives Creswell, J. W. (2014). The research informants consisted of three categories, namely the main subjects who were members of the Sekat Bakau Group, key informants from village officials who provided information related to community activities in the conservation of mangrove ecosystems, and additional informants who included community leaders and cooperation partners. Data collection was carried out through three main methods to answer research problems regarding the typology of social capital of the Sekat Bakau Group in mangrove conservation. First, in-depth interviews were conducted to explore comprehensive information about the informants' thoughts, motivations and perceptions related to social relationships, trust, networking, recognition, and group proactive actions. Second, participatory observation was carried out with the direct involvement of the researcher in group activities to understand the social dynamics and interactions that occur naturally. Third, documentation is carried out to collect supporting data from various sources such as reports on mangrove conservation activities, environmental policy documents and relevant previous studies. The data obtained consists of primary data and secondary data.

Data analysis uses an interactive model from Miles and Huberman which consists of four stages that are carried out continuously and interactively until data saturation is achieved (Moleong L. J, 2007). The first stage is data collection through interviews with members of the Mangrove Bulkhead Group, observation of conservation activities and documentation of related reports. The second stage is data reduction by selecting information relevant to the role of the group's social capital, compiling a summary of the interview and identifying the main themes of the observations. The third stage is the presentation of data in the form of tables or charts to show the relationship between social capital and the success of mangrove ecosystem conservation. The fourth stage is the drawing of conclusions about the typology and social capital barriers of the group based on data analysis that has been carried out by verifying findings through discussion and triangulation. The authenticity of the data is guaranteed through triangulation tests which are carried out in two ways. The triangulation method is carried out by comparing the information obtained from the interviews with the observational data to ensure the correctness of the findings (Afrizal, 2014).

RESULTS AND DISCUSSION

The coastal area of Buruk Bakul Village, Bukit Batu District, Bengkalis Regency is one of the areas that has the potential for a strategic mangrove ecosystem but faces various challenges of environmental degradation. The geographical condition of the village located on the east coast of Sumatra makes this area vulnerable to the impact of climate change, coastal abrasion, and human activities that are less environmentally friendly (Kadarisman & Susanti, 2022). The mangrove ecosystem in this region is under significant pressure due to land conversion for various economic interests, environmental pollution, and lack of public awareness of the importance of mangrove forest conservation (Susanti et al, 2024). Concern about the degradation condition of the mangrove ecosystem is what moved a group of people from Buruk Bakul Village to form a conservation initiative known as the Sekat Bakau Group. The formation of this group began from the anxiety of several individuals who witnessed the increasingly massive

destruction of mangrove forests and its negative impact on the lives of coastal communities. The initial preservation efforts carried out by this group did not necessarily receive full support from all levels of society, even facing various challenges ranging from skepticism of residents, limited resources, to lack of formal institutional support. However, the group's commitment and consistency in carrying out the conservation mission gradually began to show positive results that could be felt by the surrounding community.

The Theoretical Foundations of Social Capital

The conceptualization of social capital in the research integrates the theoretical perspectives of Putnam (2000) who emphasized networks, norms, and beliefs as the foundation of community coordination, Fukuyama (2002) who added an element of mutual trust and included the dimension of proactive action, and Bourdieu (1986) who presented the concept of recognition. The five elements of social capital, namely networks, trusts, norms, recognition, and proactive actions are analyzed through the typology of bonding for internal group cohesion, bridging to build bridges with local communities, and linking to connect with formal institutions or partners (Putnam in Usman, 2018) in supporting the preservation of the mangrove ecosystem of the Sekat Bakau Group in Buruk Bakul Village. The application of these theories in this study is not only descriptive, but also analytical to understand how social capital works in encouraging the sustainability of conservation activities in the midst of various limitations faced by groups.

The findings of the study show that the social capital of the Sekat Bakau Group can be classified into three main typologies according to the characteristics and scope of the social relationships formed. The first typology is social bonding capital which reflects the strength of social bonds within the group that are built on the basis of common identity, values (Hasbullah, 2006) and environmental conservation goals. The second typology is social capital bridging which describes the ability of groups to build bridges of cooperation with various parties outside the group but still within the scope of the local community (Claridge, 2018). The third typology is social capital linking, which shows the capacity of groups to establish vertical relationships with formal institutions and external parties that have greater authority and resources (Alfiah & Susanti, 2023). Each type of social capital has specific characteristics and functions in supporting the mangrove ecosystem preservation movement. Social capital bonding functions as the foundation of the group's internal strength which is built through five main elements, namely internal social networks, trust between members, norms and group rules (Fathy. R, 2019), recognition of the role of each member (Hidayat et al, 2024), as well as proactive actions in conservation (Hidayat et al, 2020). Social capital bridging acts as a liaison with various elements of local society to expand the base of support and participation. Meanwhile, social capital linking serves as a catalyst to access external resources and formal legitimacy (Anggraeni & Subekti, 2022) necessary for the sustainability of conservation programs. The typology of social capital of the mangrove barrier group can be described through the form of social capital elements, namely networks, beliefs, norms, recognition, and proactive actions. As analyzed below:

Sekat Bakau Group Network

Networks are an important element in the typology of social capital that describes the relationships and linkages between individuals, groups, and institutions in the process of environmental conservation (Sayuti et al, 2024). The bonding network in the group is reflected in the strong internal relationships between members which are built on the basis of common social backgrounds, values, and goals. The active involvement of members in routine activities such as planting, watering seedlings, and maintaining mangrove areas shows a high level of collective awareness. Communication between members takes place openly through face-to-face meetings and digital media such as WhatsApp groups. Although not all members have access to digital technology, informal communication such as meeting on the street, coffee shops, or during social activities remains an effective means of maintaining group cohesion. This bonding is also seen from the involvement of female members who, even though they have just joined, show active participation in group activities. Their participation strengthens the equality of roles in conservation efforts (Setiyawan, 2024).

Meanwhile, the bridging network develops from the group's relationship with the surrounding community, other conservation groups, and village government (Claridge, 2018). The Sekat Bakau Group actively builds

interaction with various elements of the community through open meetings, informal discussions and the use of village digital communication groups. Community involvement in group activities is not only symbolic, but reflects a real openness to collaboration (Setiyawan, 2024). The support of the village government is also part of this network, where the group routinely reports on activities, asks for permission for the program to be carried out, and involves the government in training and planting activities. In addition, the Mangrove Partition Group also builds horizontal connections with other conservation groups in the coastal area of Bengkalis such as KTNH Pakning Asal, Sepahat Hijau, and the Putri Sembilan Village Conservation Group.

The linking network shows that the group has established close interaction with institutions such as the Peat Foundation, the Global Environment Center from Malaysia, Aramco Asia Singapore, as well as lecturers from the University of Riau and the Islamic University of Riau. This interaction is established through digital communication media such as WhatsApp groups and is strengthened by regular meetings at both the local and regional levels (Alfiah & Susanti, 2023). In this relationship, the group is not only the recipient of assistance, but also the partner who actively provides activity reports, shares good practices, and discusses contextual conservation strategies. Through this network, the group gained access to funding, technical training, and institutional support that strengthened the group's internal capacity (Fathy. R, 2019). In addition, the group's involvement in regional and even international forums through partners such as GEC shows that the linking network also serves as a bridge of knowledge and experience across regions and countries (Triyanti et al, 2017).

Trust of the Sekat Bakau Group

Trust is a core element in the formation and sustainability of social capital, especially in environmental conservation groups such as the Sekat Bakau. Trust within the group not only unites members, but also strengthens external relationships and allows for cooperation between institutions (Fathy. R, 2019). The bonding trust in the Sekat Bakau Group is manifested in the form of mutual trust between members which gives rise to a strong commitment to common tasks. Each individual in the Sekat Bakau group shows a willingness to play a role without coercion, reflecting a high emotional bond and collective awareness of the importance of mangrove conservation. Group members are not only involved in physical activities such as seeding and planting, but also share responsibilities in managing group activities, including in terms of decision-making and financial management.

Bridging trust in the Sekat Bakau Group is built through relationships between the group and the wider community, village governments and other conservation groups. This belief allows groups to bridge internal goals with broader social interests (Alfiah & Susanti, 2023). The group believes that the people of Buruk Bakul Village have great potential to be involved in mangrove conservation. Therefore, various educational and socialization efforts are carried out through informal meetings, social media and involvement in joint activities (Budi et al, 2023). Although community participation in routine activities is still limited, moral support and the provision of land access for conservation indicate a form of mutual trust that is beginning to grow. From the side of the Buruk Bakul village government, the form of trust is reflected in the issuance of official permits, legal recognition through decrees, and support for group activities. Trust is also strengthened by the group's consistency in reporting and willingness to receive input from the village government in the implementation of the program. Trust with other conservation groups can be seen from the groups that trust each other by attending activities and in the sale of seeds can be seen from the Green Sepahat Group who give mangrove seeds and fires to the mangrove bulkhead group for their planting activities.

At a higher level, trust linking is built by the Sekat Bakau Group through partnerships with various external institutions such as non-governmental organization, educational institutions, and the private sector. This belief is vertical, connecting grassroots groups with entities that have greater resources and influence (Triyanti et al, 2017). Partners such as the Yayasan Gambut, Global Environment Center, and Aramco Asia Singapore have collaborated with the group through various training programs, seed assistance, and facilitation of conservation activities. Trust from partners is built because the group shows transparency through regular reports, documentation of activities and publications on social media. The maintenance of aid assets, such as seedhouses and breakwaters, strengthens partners' confidence that the group is able to maintain the sustainability of the programs being run. The mutual relationship in

the publication of activities is an additional indicator of the legitimacy of the group (Usman, 2018) in the eyes of partners, while strengthening their credibility at the local and international levels.

Norms of Sekat Bakau Group

Norms in the Sekat Bakau Group are formed in both written and unwritten form, and both function as guidelines that maintain order, shared responsibility, and agreement in carrying out mangrove conservation activities. Norms are social control devices that create participatory spaces and bridge internal and external group relationships (Sayuti et al, 2024). Norms in bonding networks arise from agreements and decisions with members that regulate internal relationships within the group (Setiyawan, 2024). Written norms are reflected in the existence of the Articles of Association/Bylaws (AD/ART) which contain the basic principles of the organization, the rights and obligations of members, and the group work mechanism. In practice, the rules in AD/ART are not just administrative formalities, but have become part of the group's daily life. The group's function as a forum for mangrove information and the implementation of conservation activities has been carried out consistently. Each member has the right to speak, express an opinion, and be obliged to attend meetings and be actively involved in activities. On the other hand, unwritten norms are present through the group's habits in setting a rotating picket schedule, confirmation of attendance and the obligation to attend routine group activities. And if there is an absence without reason, there will be social sanctions in the form of reprimands applied informally to maintain discipline and a sense of responsibility. When logistical needs such as the consumption and maintenance of equipment cannot be financed from group funds, the norm of voluntary contributions becomes a practice that is carried out with mutual awareness and agreement.

Bridging norms form a reciprocal relationship (Hasbullah, 2006) between groups and village communities and village governments. Informal agreements between groups and communities on the ban on mangrove logging are a clear example of unwritten norms that have been implemented socially. Although there is no legal rule that directly regulates it, the community has environmental awareness to protect mangrove forests as a source of common life. This norm is also reflected in the role of the community in supervising violations such as the destruction of mangrove plants, even against migrants. In relation to the village government, the written norm can be seen from the existence of a group decree issued by the village government as the identity of the group's existence and function. Unwritten norms regulate the need for coordination before the implementation of activities, especially those involving external parties. Village government involvement from planning to implementation and this involvement has become a habit that shows respect for the local government structure (Setiyawan, 2024).

A number of both written and unwritten norms regulate the interaction between the Sekat Bakau Group and partner institutions that have greater authority and resources (Sulistiyorini et al, 2018). In written form, norms are embodied in cooperation agreement documents that describe the rights and obligations of both parties, procedures for implementing activities, and evaluation and reporting mechanisms. This document is not only an administrative requirement, but also a legal basis that strengthens trust between groups and partners (Budi et al, 2023). On the other hand, unwritten norms develop from the group's internal practices in maintaining and caring for assets provided by partners, such as seedlings, nursery houses and breakwaters. The group's commitment to record, maintain and report on the condition of assets on a regular basis shows that the unwritten norm has functioned effectively as a means of control and openness to partner assistance.

Recognition of Sekat Bakau Group

Recognition is an important element of social capital that strengthens solidarity, engagement, and social legitimacy among individuals and institutions within a group. In the Sekat Bakau Group, recognition reflects the extent to which the existence, contribution, and ability of the group and its members are recognized both internally, across groups, and by external parties who have greater authority or resources (Hidayat et al, 2024). This form of recognition not only strengthens the group's position, but also encourages participation (Bourdieu, 1986) and the sustainability of the role of mangrove conservation.

In the realm of bonding, recognition is reflected through the recognition between members of each other's roles and existence in the group. The active involvement of all members in mangrove conservation activities, a clear

division of duties and the inclusion of names in the Sekat Bakau Group Decree are forms of internal recognition that provide space for each member to be appreciated formally and informally. Members are not treated in an organizational structure, but are positioned on an equal footing according to their respective roles and contributions (Setiyawan, 2024). The division of tasks based on interests and abilities also emphasizes that the individual's potential is recognized and optimized for the achievement of group goals. Some focus on documentation activities, others are in charge of monitoring the sea, or managing seeds, and all contribute according to their abilities.

The recognition of bridging, as seen from the people of Buruk Bakul Village, showed recognition of the Sekat Bakau Group through moral support, verbal appreciation, and the granting of land use permits for nursery activities. Although active community involvement in the group's routine activities is still limited, recognition in the form of land support shows a level of confidence in the group's capabilities. On the other hand, the recognition from the village government is more formal and clear. The issuance of a decree on group recognition, as well as the appointment of groups as village representatives in visits by external parties such as DLHK and other agencies are evidence of institutional recognition. In fact, in the mangrove crab cultivation program, the village government entrusts the management entirely to the group, indicating that the group has been recognized administratively as well as operationally (Fathy. R, 2019) as an important actor in environment-based development at the village level. In addition, a form of recognition also comes from other conservation groups that have established collaborative relationships with the Sekat Bakau Group. Attending events, sharing experiences, and supporting each other shows mutual recognition among groups with similar missions..

Recognition at the linking level comes from external partners who have higher authority or resources (Setiyawan, 2024), such as national and international NGOs, as well as private companies. The Sekat Bakau Group received various forms of formal recognition, such as an award from the Global Environment Center (GEC) for its dedication to mangrove conservation, as well as participation in a comparative study to Malaysia as a form of confidence in the group's capabilities. In addition, the group also showed its recognition of partners through the installation of banners that included the names and logos of partners in the activity area, as a form of respect and gratitude. Recognition is not only symbolic, but also opens up access to resources, training, and advanced program support (Bourdieu, 1986).

Proactive Action

Proactive action is an important part of the typology of social capital that reflects the collective ability of a group or individual to act on initiative without having to wait for instructions from outside parties (Alfiah & Susanti, 2023). In the Sekat Bakau Group, proactive action is an indicator of the level of awareness, responsibility and habits that have grown and taken root within the group as well as in the social networks they build. This action is not only technical, but also reflects a commitment to the sustainability of mangrove conservation in an independent and participatory manner.

The bonding typology, proactive actions are reflected in the form of the initiative of group members to be actively involved in each activity without having to be directed by the management. Each individual in the group understands their duties and roles, so there is no need to wait for directions in terms of seed preparation, equipment transportation, and seedling care during the dry season. This awareness is born from the value of togetherness and a strong sense of belonging to the group. The spirit of mutual cooperation is the basis for collective behavior, where the contribution of energy, time and even personal funds is done voluntarily (Timban & Ngangi, 2019). Members also actively share the knowledge and experience they gain from outside to enrich the group's internal capabilities. This proactive value has become an innate character in the group that makes conservation activities not just a routine, but part of a shared social responsibility.

In bridging, the Sekat Bakau Group's proactive actions develop a community-based educational approach through environmental campaign activities, flag parades, and "saving mud" programs involving children and villagers. This approach has proven to be effective in building ecological awareness of the community and expanding social support networks for the mangrove conservation movement (Hidayat et al, 2020). The group also actively uses informal moments such as wirid and sports activities to insert messages of preservation. In addition to the community,

relationships with the village government are also built through the submission of routine reports on ecosystem conditions, submission of proposals, and involvement in village development deliberations. Although assistance from the government is not always present quickly, the perseverance in conveying ideas and data has borne fruit, such as the start of the mangrove crab cultivation program. Proactive actions are also manifested in collaboration with other conservation groups in coastal areas, which are carried out on an initiative by the Sekat Bakau without having to wait to be invited. The communication pattern between conservation groups is carried out through cross-promotion of activities, exchange of experiences, and logistical support such as seeds.

In the realm of linking, group proactive actions are reflected in consciously and structured relationships with external institutions such as NGO, international NGO, and partners from the private sector (Sulistiyorini et al, 2018). The group not only receives passive assistance, but demonstrates high accountability through regular reporting even for completed programs. For example, the group still sends Organic Processing Equipment (APO) development reports from GEC periodically as a form of responsibility. The group also prepares proposals independently, both for existing partners such as the Peat Foundation and Aramco, as well as to institutions that have not yet established cooperation such as BPSKL. This consistency has built a positive reputation for the group in the eyes of partners, who consider Sebbahan Mangrove to be a trusted and active partner. Partners also provide a quick response to group proposals because of their good track record. This action proves that the group has a mature organizational capacity and is able to utilize vertical networks (Anggraeni & Subekti, 2022) to support the sustainability of conservation programs.

Analysis of the Typology of Social Capital of Sekat Bakau Group in Mangrove Ecosystem Conservation

Social capital is a key resource that allows groups to collaborate effectively in achieving common goals. In the preservation of mangrove ecosystems, the Sekat Bakau Group shows the dynamics of diverse and tiered social capital. Based on the analysis framework of Grootaert and Basteler in Usman, S (2018) who sorted out the technique of social capital observation through observation based on objective components, namely networks, associations or organizations. Field findings have revealed the patterns of social capital barriers that form the social capital typology pyramid through the Sekat Bakau Group network, as follows:

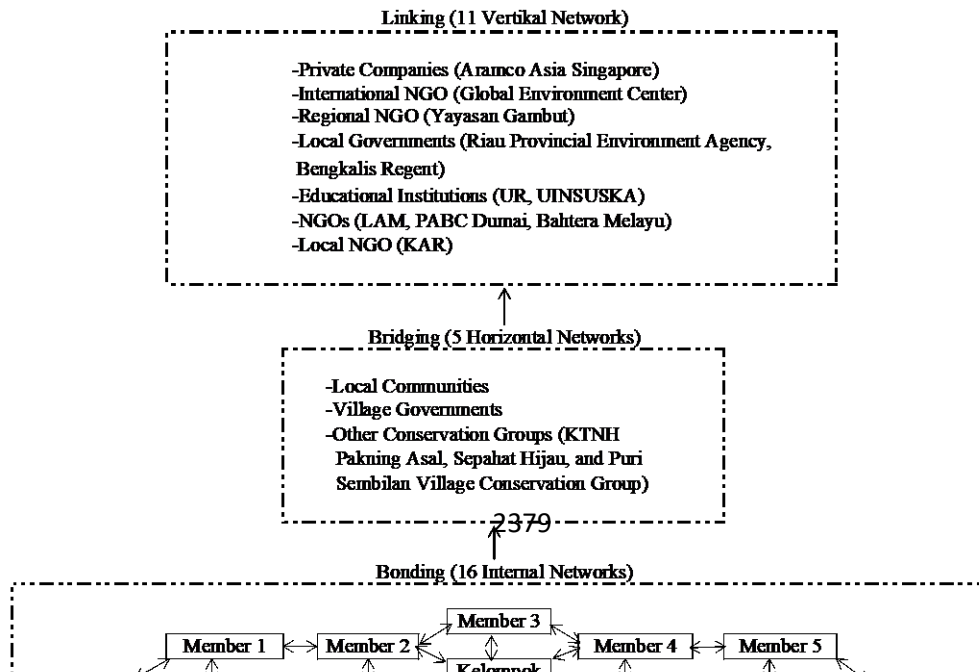


Figure 1. Typological Pattern Social Capital of Sekat Bakau Group

Source: Primary Data Processing, 2025

Based on the pyramid above, the arrows indicate the flow and relationship between levels. The structure of this pyramid reflects what Woolcock (2001) conceptualized as an optimal "social capital portfolio", in which groups have a balance between internal cohesion (bonding), horizontal connectivity (bridging) and vertical access (linking). The author's current research analyzes the social capital network of groups through the typology of social capital including the levels of bonding, bridging and linking as follows:

At the bonding level, the Sekat Bakau Group shows a very strong typology of social capital by involving all 16 members of the group in an integrated internal network. The main characteristic of this level is the absence of passive or marginalized members, where each individual is actively involved in mangrove conservation activities. This reflects what Putnam explained in hasbullah (2006) that social capital bonding serves as a "social glue" that binds members of the community with similar backgrounds. The typology of bonding can be seen from the high participation of members in routine activities such as planting mangrove seedlings, monitoring ecosystems and group discussions. Each member has a clear role and responsibility, creating a positive system of interdependence that strengthens internal solidarity (Qurniati, R. et al, 2017).

At the bridging level, the Sekat Bakau Group built three strategic network lines that expand the reach and impact of its activities. First, relationships with local communities that enable the transfer of knowledge and conservation practices to the wider community. Second, partnerships with village governments that provide legitimacy and support for local policies. Third, collaboration with other conservation groups such as KTNH Pakning Asal, Sepahat Hijau, and the Putri Sembilan Village Conservation Group. This network creates inter-group connections that allow for the exchange of knowledge, resources and experiences (Damastuti, E. et al, 2022).

The linking level shows the most diverse social capital, where the Sekat Bakau Group has managed to build vertical networks with various formal institutions from local to international. This network includes local NGOs such as the Riau Advocacy Group (KAR), the Malay Customary Institute (LAM) and the PAB Club Dumai; local governments including the Riau Provincial DLHK and the Bengkalis Regency Government; Regional NGO such as the Yayasan Gambut; International NGO such as the Global Environment Center; to private companies, namely Aramco Asia Singapore. This diversity of networks provides access to financial, technical and strategic resources that are urgently needed for the sustainability of conservation programs. Coleman (1988) emphasizes that social capital linking allows for the change of resources from different authorities or partners.

Social Capital Barriers of Sekat Bakau Group

Social capital in coastal communities is not necessarily formed perfectly. In practice, there are always obstacles that affect the effectiveness of social organizing, both from the internal side of the group and in its interaction with external parties (Triyanti et al, 2017). The Sekat Bakau Group, which is known to be active in the preservation of

mangrove ecosystems, also faces a series of obstacles that hinder the optimization of their social capital. The pattern of the obstacle, as illustrated in Figure 5.1 below:

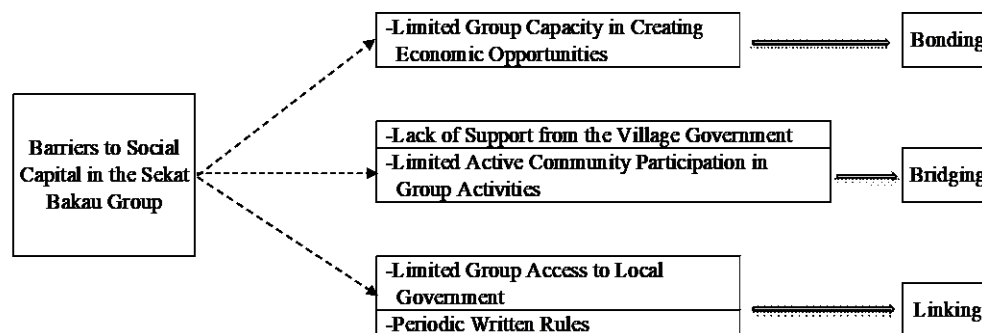


Figure 2. Patterns Social Capital Barriers of Sekat Bakau Group
 Source: Primary Data Processing, 2025

Based on the pattern of social capital barriers, barriers have been grouped into three types of bonding, bridging and linking. All three form interrelated barriers and influence each other. Bonding barriers, this obstacle can be seen from the group's internal ability to manage conservation activities into activities that have sustainable economic potential. Although solidarity and the spirit of conservation are very strong, the members of the group do not have sufficient knowledge and skills to turn conservation activities into a common economic resource. This weakness indicates that the social bonds that have been built have not been able to be capitalized on in the form of social entrepreneurship (Sulistyorini et al, 2018). This inability is not due to a lack of will, but rather to the absence of strategies, training, and systemic support to develop environmentally based products or services that have economic value.

Obstacles in the bridging dimension arise from two sides: first, the inclusion of the Sekat Bakau Group program in official village planning documents such as RPJMDes; second, the low active participation of the surrounding community in group activities. The absence of formal recognition in village development documents makes the conservation program carried out lacking the policy force that supports its sustainability. In addition, although the community shows moral support, their participation in tangible forms such as membership or participation in conservation activities is still very limited. This shows that the horizontal relationship of the group with the surrounding social environment has not been built optimally. The community does not yet feel that having these activities is part of their shared responsibility, so active involvement is still very sporadic. On the linking side, the obstacles are more diverse because they concern limited group access to local government institutions. This position is an obstacle to the group's difficulty in establishing vertical relationships with formal institutions that should provide long-term support (Triyanti et al, 2017). The Sekat Bakau Group has established a number of collaborations, but most of them come from non-governmental parties such as NGO and private partners. Relations with local government agencies, such as DLHK and local governments are still periodic, i.e. only assistance is provided once and is not built within a sustainable framework. In fact, in some cases, the cooperation that has been carried out does not have a follow-up or monitoring and evaluation system that can encourage gradual increase in group capacity. In addition, assistance from academic institutions is more of a formality of community service programs, without a long-term mentoring scheme that can encourage institutional transformation of the group.

The condition of social capital barriers in the long term can lead to a decline and cessation of the role of preservation that has been built with high enthusiasm. For this reason, the solution approach needs to target the strengthening of group institutions as a whole. Technical assistance for the development of mangrove-based businesses, including programs in village planning, and the formation of sustainable partnerships with local

governments and donor agencies should be a priority, not a period. Thus, the group not only survives, but is also able to grow into a more independent and influential group at the local, regional and national levels.

CONCLUSION

The social capital contained in the Sekat Bakau Group shows a typology of bonding, bridging and linking that is close to elements in the form of networks in each relatively long typology, namely 16 networks in bonding including networks among group members, 5 networks in bridging namely networks with village communities, village governments and other conservation groups including KTNH Pakning Asal, Sepahat Hijau and the Putri Sembilan Village Conservation Group and linking includes 11 networks, namely with partners. With norms in the form of written and unwritten norms. Mutual trust between fellow group members, group trust horizontally and group trust vertically. Verbally and formally acknowledged acknowledgments and proactive actions directed by the group to the community, village governments, other conservation groups and partners. The social capital barriers faced by the Sekat Bakau Group in the preservation of mangrove ecosystems are divided into three categories, bonding barriers that see the lack of the group's internal potential to be economically empowered, bridging barriers that describe the lack of community involvement and recognition from the local government. As well as linking barriers, limited group access to resources and formal legitimacy of higher structures.

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