

ORIGINAL ARTICLE

UNDERSTANDING THE EXPERIENCE OF MULTI-SECTORAL PARTNERSHIPS IN RIVER MANAGEMENT FOR A HEALTHY AND SUSTAINABLE CITY IN BANJARMASIN, INDONESIA

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ABSTRACT

A sustainable city is one of the programs required to achieve the 2030 SDGs. Although Banjarmasin contains a thousand rivers along which a large population resides for livelihood support, they are still polluted by some people that fail to perform proper subsequent maintenance. The problem of river waste will have an impact on public health. A study on river waste management in Banjarmasin City is essential, specifically in multi-sectoral partnerships. It plays an integral role in organizing a Healthy City. Therefore, this study aimed to understand the experience of multi-sectoral partnerships in river management in Banjarmasin to create a healthy and sustainable city. A phenomenological descriptive method was carried out through in-depth interviews with 16 participants, followed by a survey, and documentation. Data collection through in-depth interviews was conducted from August 2020 to June 2021 following certain guidelines. To ensure the rigor of data (trustworthiness), triangulation and comparison to existing documents were performed. Furthermore, partnership activities were observed, then the data were analyzed by identifying all the statements relevant to the phenomenon or horizontalization. In this study, it was showed that the reasons to join the partnership include: first, community awareness and responsibility due to job description. Second, the factors associated with partnership effectiveness, namely commitment, communication, and control among various sectors. Empowerment of local communities and effectiveness of partnership are needed for river maintenance. It was concluded that multi-sectoral partnerships are important in addressing river management for sustainable healthy cities.

Keywords: Healthy Cities, Multi-stakeholder Partnerships, River Management

INTRODUCTION

A sustainable city is created by good urban planning¹, however, poor urban planning contributes to the spread of various diseases². This improves the economy, society, and environment for health promotion and it is the key to achieving the Sustainable Development Goals (SDGs). Furthermore, the indicators for a healthy city include housing, public transportation, industrial safety, and food security, as well as healthy social behavior, mining, forest, people, and tourism³⁻⁵.

The implementation of the healthy city in South Kalimantan Province reached 76.92%⁶. Only 6 cities including Banjarmasin have successfully passed the national verification to be tagged as healthy. Banjarmasin is the city of a thousand rivers along which a large population resides to obtain their livelihood, such as tourism, transportation, sand-mining, bathing, toileting, and washing⁷. However, some people still pollute the rivers and fail to carry out proper maintenance after.

There are negative impacts caused by human activities such as pollution from households, industries, and chemical wastes as well as plastics which affect water quality⁸. Banjarmasin river shows an *E. coli* bacteria content of 54.507 MPN/100 ml, while the standard value ought to be 100 MPN/100 ml. This indicates that the waterbody has been polluted⁸ hence, river management is needed to keep Banjarmasin healthy.

The obstacles to water quality improvement in Banjarmasin rivers include lack of community awareness about the environment and absence of synergy in river management between agencies and government⁸. Therefore, stakeholders' coordination and cooperation, as well as local communities' involvement, are needed for river management. However, multi-sectoral partnerships experiences in river management have not been investigated in Banjarmasin city. Therefore, this study aimed to understand the experience of multi-sectoral partnerships in river management in Banjarmasin to create a healthy and sustainable city.

METHODS

Ethical approval was received from the health research ethics committee faculty of nursing Universitas Airlangga, Indonesia (number: 1850-KEPK). This study used a qualitative descriptive design with a phenomenological approach and

data were collected from various sectors in Banjarmasin City that had an experience of partnership in river management. Furthermore, 16 participants from all the sectors were involved in Banjarmasin City river management and their overview can be seen in table 1.

Table 1. Characteristics of participants

Participant ID	Sex	Age	Education	Sectors
P01	F	43	Master degree	Environmental Health Expert
P02	M	60	Master degree	Green Community Forum/ <i>Forum Komunitas Hijau</i> (FKH), River Care Community/ <i>Masyarakat Peduli Sungai (Malingai)</i>
P03	M	45	Bachelor degree	River field, Office of Public Work/ PUPR Banjarmasin
P04	M	45	Bachelor degree	North Banjarmasin District Representative
P05	F	25	Bachelor degree	NGO "KAKI KOTA" Banjarmasin
P06	F	50	Bachelor degree	Middle Banjarmasin District Representative
P07	M	43	Bachelor degree	Pekapuran Laut Village Representative
P08	M	45	Bachelor degree	KOTAKU program Banjarmasin
P09	M	54	Bachelor degree	Healthy City Forum/ <i>Forum Kota Sehat</i> Banjarmasin
P10	M	62	Master degree	River guard (Pemangku Sungai)
P11	M	57	Master degree	Governance field, Health Office Banjarmasin
P12	M	48	Master degree	Governance field, Environmental Office Banjarmasin
P13	M	48	Bachelor degree	Private company
P14	M	45	Senior high school	River guard
P15	F	44	Bachelor degree	Governance field, Environmental Office Banjarmasin
P16	M	34	Doctoral degree	Urban Settlement Architect Engineering expert

Data collection through in-depth interviews was conducted from August 2020 to June 2021 following certain guidelines (Table 2). This used a previous study regarding factors associated with partnership success such as attributes of the partnership, communication behavior, and conflict resolution technique⁹⁻¹¹. Once the participant provided a short response, further

information is requested. Each interview lasted around 60-90 minutes and for some participants, more than one interview meeting was conducted. All information during interviews was recorded and transcribed for analysis, then the data collection process was stopped after reaching saturation.

Table 2. Questions asked during semi-structured interviews

Question	Rationale
The questions are about personal details (gender, age, education degree, and sectors)	Socio-demographic
How long have you been living in riverbank?	Reason
How is the condition of the river in Banjarmasin city?	
Why did you join in the river management partnership?	
What contribution have you made?	
What preparations are planned before joining into a partnership?	Effectiveness
What are the obstacles during partnership?	
What the strategies are used during partnership?	

To ensure the rigor of data (trustworthiness), triangulation and comparison to existing documents were performed. Data analysis was conducted by identifying all the statements relevant to the phenomenon or horizontalization, then partnership activities were also observed. The next step was clustering of themes used to write a description of the phenomenon, such as textural and structural descriptions from which a fundamental structure was produced^{12, 13}.

RESULTS

The results showed all reasons to join the river management partnership to create a healthy city and the factors associated with its effectiveness. These reasons included community awareness and responsibility, while the factors associated with partnership effectiveness were commitment, communication, and control.

Community awareness

Awareness is the commonest reason why participants enter into river management partnerships in Banjarmasin City. They feel that the river is a part of life, even though some people do not live on the river banks. This concern can be seen in the following statements:

P02: "Atas dasar kepedulian sebagai warga Kota Banjarmasin, yang memiliki banyak sungai dan terdampak oleh sungai-sungai besar dan perilaku masyarakat yang mulai kurang peduli terhadap kebersihan dan kelestarian sungai yang merupakan potensi wisata."

P02: "On the basis, we care as residents of Banjarmasin, which has many rivers and is affected by big rivers. The behavior of people who are starting to care less about the cleanliness and sustainability of rivers which are tourism potentials."

P03: "Mengingat pengamatan kami sampah-sampah plastik berasal dari sungai-sungai kecil yang dimana kebanyakan banyak dihuni penduduk yang budaya tidak peduli dengan kebersihan lingkungannya intinya kita harus bergerak bersama"

P03: "Our observation is that plastic waste comes from small rivers inhabited by many people who do not care about the cleanliness of the environment, hence the point is that we must move together."

P04: "Rasa memiliki yang tinggi akan keberadaan sungai sebagai aset bagi daerah."

P04: "A high sense of belonging to the river as an asset for the region."

P05: "Kami merasa terganggu melihat kondisi sungai di Banjarmasin sekarang ini, terutama di sungai Mui ini, katanya Banjarmasin adalah kota seribu sungai dan nyatanya tidak, untuk kondisi sungainya kotor, ada yang membuang sampah sembarangan, ada yang membangun perumahan

sehingga sungai-sungai tersebut menjadi sempit."

P05: "We are moved to see the current condition of the river in Banjarmasin, especially the Mui river. The condition of the river is dirty, some are littering, some are building houses which makes the rivers become narrow."

Responsibility

Responsibility is one of the reasons stated by some participants due to their job description. They have to be involved in river management partnerships, as can be seen in the following statement:

P10: "Pengelolaan sampah merupakan tugas dan tanggung jawab bersama, tidak bisa hanya diselesaikan oleh satu pihak saja, perlu kolaborasi semua pihak, stakeholder, PT, Swasta, NGO, dari masyarakat secara luas."

P10: "Waste management is a shared task and responsibility, it cannot be solved by one party alone, as it requires collaboration from all parties, stakeholders, PT, private sector, NGO, and the wider community."

P11: "Tanggung jawab sebagai warga kota, untuk turut menyelamatkan kota dari sampah terutama sungai di Kota Banjarmasin dengan menjadi bagian dari berbagai komponen masyarakat."

P11: "It's our responsibility as a city citizen to help save the city from garbage, especially rivers in Banjarmasin City by being part of various components of society."

P01: "Awalnya dari Satgas kebersihan, sering terjun, dan menjadi leader dalam Satgas, jadi untuk kebersihan sungai saya pimpin, sedari dulu di sini."

P01: "Initially from the cleaning task force, I often went to work and became a leader in the task force, so I led the river cleanliness, I've been here for a long time."

Factors associated with partnership effectiveness are commitment, communication, and control.

Commitment

Commitment is the most common factor associated with partnership effectiveness in river management in Banjarmasin City, as can be seen in the following statement:

P02: "Komitmen dengan political will dari pimpinan daerah untuk mendukung gerakan nasional kemitraan penyelamatan air."

P02: "Commitment with local political stakeholders to support the national water-saving partnership program."

P04: "Komitmen bersama dari semua sektor dan pemerintah serta masyarakat."

P04: "Commitment from all sectors, government, and society"

P05: "Kesamaan tujuan dalam pengelolaan sampah sungai dan "Benang merah" perencanaan dalam pelaksanaan hal tersebut agar terjadi kolaborasi yang efektif dan bersinergi antar stakeholder."

P05: "The same goal in river waste management and planning plot, hence, there is effective collaboration and synergy between stakeholders."

P08: "Adanya visi dan misi yang sama antarsemua pihak terkait pengelolaan sampah sungai, serta adanya political will dari pemerintah daerah."

P08: "There is a common vision and mission between all parties in river waste management, as well as the strength of the local government."

P09: "Komitmen pemerintah dalam penganggaran pengelolaan sampah terutama mengenai sampah di sungai."

P09: "The government's commitment to budgeting for waste management in rivers."

P11: "Komitmen dari semua pihak"

P11: "Commitment from all sectors"

P15: "Komitmen masyarakat dan pemerintah."

P15: "Community and government commitment."

Communication

The other factor associated with partnership effectiveness in river management in Banjarmasin City is communication, as can be seen in the following statement:

P03: "Untuk sampah di sungai besar (Sungai Martapura) diperlukan koordinasi atau komunikasi lah dengan kabupaten yang ada di hulu sungai atau ditata kelola oleh pengelola DAS Martapura atau oleh SKPD provinsi."

P03: "Waste settlement in the Martapura River requires coordination or communication with regencies upstream of the river or management by the Martapura watershed manager or by the provincial SKPD."

P12: "Komunikasi untuk memastikan pola kemitraan terkondisikan dan terkoneksi dalam pengelolaan sampah sungai dengan baik."

P12: "Communication to ensure partnerships and connections in good river waste management."

P13: "Komunikasi agar ada pemahaman bersama."

P13: "Communication to create mutual understanding."

Control

Control is also one of the factors associated with partnership effectiveness in river management in Banjarmasin City, as can be seen in the following statement:

P01: "Kontroling dengan peraturan yang mengikat."

P01: "Control by regulation"

P03: "Hendaknya ada penguatan dalam pengelolaan sampah di sungai-sungai yang kecil."

P03: "There should be strengthening in waste management in small rivers."

P07: "Hal penting dalam kemitraan, tiap per 3 bulan harus ada evaluasi dengan warga sekitar sungai."

P07: "The important thing in the partnership is that every 3 months there must be an evaluation with the residents around the river."

P10: "Yang penting ada partisipasi pemantau kota yang betul-betul memperhatikan sungai, ujar urang Banjar jangan panas-panas tahi ayam."

P10: "The most important thing is the participation of city observers who pay attention to the river."

P14: "Untuk menjadi kota sehat di Banjarmasin perlu diperlakukan pemberlakukan UU atau Peraturan. Perda di Banjarmasin ini tidak berlaku sama sekali, lemah sekali, perlu ketegasan."

P14: "To become a healthy city in Banjarmasin, law or regulation is needed. The regional regulations in Banjarmasin are weak and less firm."

P16: "Perlu adanya forum evaluasi bersama, perlu ada tujuan yang terukur dan memiliki time frame yang jelas, perlu juga adanya bidang/UPT yang berkolaborasi untuk mengelola, membina, dan melakukan pengawasan terhadap sungai dan masyarakat sekitar sungai."

P16: "There needs to be an evaluation forum, goals, and a clear time frame. It is also necessary to have fields that collaborate to manage, foster, and supervise rivers and communities."

DISCUSSION

Banjarmasin, the study area, had special characteristics, many rivers, and a large population residing along the bank to obtain support for their livelihood. However, some people do not maintain the river, therefore river management is required to keep this city healthy. River management involves agencies and government or multi-sectoral partnerships. The participants used were from various river management sectors in Banjarmasin City. This study also supported the national program, water security or *Ketahanan Air* that invited all sectors to support the Integrated Water Resource Management (IWRM)¹⁴. An understanding of the multi-sectoral partnerships experience in river

management in Banjarmasin is needed to create a healthy and sustainable city.

The two themes in this study are the reasons for joining the partnership and the factors associated with its effectiveness. The first perception expressed in terms of the stated reasons is community awareness. The results showed that community awareness is needed in river management. Banjarmasin residents ought to protect the rivers, because they support the city's activities and economy, specifically in the tourism aspect. However, some people still throw garbages in the river while using the banks as land to build houses. Consequently, the residents need to be aware of how to maintain the river. This is in line with a previous study that stated the community is expected to respond against bad river conditions¹⁵. Further, empowerment of the local community is also a required action to make people care about the river⁸ as well as to enhance participation in river maintenance⁷. Based on these results, socialization is needed among community members to increase awareness.

Another reason for joining the partnership is the responsibility, especially from respondents that have job descriptions related to the environment. This study showed that collaboration among different sectors such as stakeholders, private organizations, NGOs, and the community was needed to maintain the river and protect it from pollution. The stakeholder and community are required to protect the environment and create a sustainable city¹⁶. All sectors have a role and also need to be responsible for the river management program. Subsequently, they must work together to solve the problems encountered. This result is in line with a previous study, which mentioned that partnership leads to implementation of sustainability in an island¹⁷.

The second theme is the factors affecting partnership effectiveness. However, the participants are only effective when they have good commitment, communication, and control. This is in line with a previous studies which stated that the primary characteristics of success are commitment and communication^{18, 19}. The results indicated that commitment, the same goal as well as vision and mission from all sectors, government, and community are needed to protect the river and support the management program. Commitment refers to the willingness to make effort on behalf of the desired goals^{20, 21}. A successful partnership relates to good commitment,²² in addition, committed partners have to anticipate the problems in the programs²³.

Another factor is communication and according to the results, good communication ensures good coordination among different sectors. This is also

needed to protect the river from garbages and pollutants. A previous study stated that communication has an impact on the effectiveness of partnership^{18, 24} as well as its success¹⁹, indicating that this factor is a key for proper information delivery. Quality communication is measured by credibility, accuracy, and timeliness. Hence, the different sectors need good communication, especially the stakeholders for effective river management.

The results implied that regulation is created to control waste management. The last factor, control which also comprises evaluation, is needed as an integrated management system²⁵ to monitor the maintenance programs. It was previously reported that the lack of local government regulation due to many residents living along the riverbanks and their activities, had a negative effect on water quality⁸. Therefore, the government needs to provide a good solution to this problem, especially by relocating the riverbank residents. There is limitation in this study that was considered due to the qualitative design. The qualitative design not applicable to claim the generalizability

CONCLUSION

Healthy cities are one of the setting approaches in health promotion and also the key to achieving Sustainable Development Goals (SDGs). To implement these, attention needs to be paid to the uniqueness of the cities. Besides, multi-sectoral partnerships are important in addressing river management and creating healthy cities. In this study, it was concluded that the reasons to join the partnership include: first, community awareness and responsibility due to job description. Community awareness is needed to protect the river from wastes and garbages, as well as to ensure effective management. Empowerment of local communities is also a solution for river maintenance, to create a healthy city. Second, the factors associated with partnership effectiveness, namely commitment, communication, and control among various sectors. These involve commitment among agencies, the government, and the local community, evaluation and coordination to create good communication, as well as regulation to control the program and river waste management.

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