

# Networked Governance in Transnational Cooperation and Politics: Responding to COVID-19 Pandemic Along Thai-Laos Cross-Border Communities

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## Abstract

The outbreak of COVID-19 is a transnational threat challenging states and people beyond the frontiers. This study focuses on the networked governance in three Thai-Lao cross-border communities as a practice of transnational and political cooperative systems in surveilling, preventing, and controlling the COVID-19 pandemic. The research aims at (1) investigating the involvement of public, private sectors, and civil society in establishing participatory networks in dealing with the pandemic in Thai-Lao border communities; (2) analyzing the potential and strength of the networks of relationships; and (3) discovering guidelines on future disease outbreaks management. By using qualitative methodology and working with 59 key informants, this study discovers the roles of relevant actors in five participatory networks. It also found the horizontally and vertically grand networks of governing cooperation and collaboration among key actors as the potential and strength of the networks of relationships at community and transnational levels. Moreover, forming transnational networks among governmental agencies in twin cities along natural borders is considered a fundamental approach to developing Thai-Laos areas of cooperation. The research concludes that the networks of cooperation and collaboration during the pandemic at border areas are increasingly significant as the front-line mechanisms for effective management.

## Keywords

COVID-19; networked governance; Thai-Laos cross-border communities; transnational cooperation

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## Introduction

Since December 2019, the global community has been confronted with the coronavirus disease 2019 (COVID-19) outbreak, affecting human health and economic and social activities such as unfamiliar lifestyle changes. The rapid transmission of COVID-19 has become one of the most significant global health problems. This situation led to unprecedented border closures and restrictions in many parts of the globalized world. Accordingly, border areas and regions have gained more significance. They are essential as the front-line mechanisms in managing and controlling the movement of people to prevent the spread of the COVID-19 pandemic.

In Thailand, the Emergency Operation Center (EOC) was founded on January 4, 2020, and the first case of infection was confirmed on January 13, 2020. Between 2020 and 2022, COVID-19 variants were expected to evolve from the original coronavirus. The Thai government modified its pandemic response policies multiple times. One such change was the creation of the Centre for the Administration of the Situation due to the COVID-19 outbreak on March 12, 2020. This center was tasked with promptly reporting COVID-19 conditions to the Prime Minister for more efficient management (Bangkokbiznews, 2020; Department of Disease Control of Thailand, 2021; Ministry of Higher Education, Science, Research and Innovation, 2020; Prawantao et al., 2021). All in all, although social science knowledge cannot directly solve the problem of COVID-19, the integration and experience of social dimensions in epidemic preparedness, management, and response was still essential in terms of the formation of an effective management system in dealing with the emerging and transmission of new infectious diseases across borders in the future.

The justification for conducting this research, with a primary focus on the role of transnational networks in addressing the management of the COVID-19 pandemic, holds importance for two main reasons. Firstly, the framework of the transnational network was a new development in the study of the COVID-19 pandemic. The prevalence of COVID-19 created a context for stringent international border closures, which had not been applied in previous pandemics. However, to the best of researchers' knowledge, earlier studies of pandemics focused only on the effects of pandemics on specific groups, e.g., healthcare staff and workers, the role of local people and communities in disease surveillance and the media activities that affect the perception, understanding, and awareness of the people (Kunracha et al., 2017; Sayjai & Onchang, 2015; Sangwongdee, 2020; Yongying et al., 2019).

The study of transnational networks fulfills the previous studies by providing a better understanding of the implementation of governmental and non-governmental agencies in managing COVID-19. At the same time, it sheds light on the limitations and inefficiency of state management in dealing with this pandemic. The research contributes a guideline for using the network analysis approach in strengthening actors and networks to the success of surveilling, preventing, and controlling pandemics in cross-border communities, which is essential for the preparedness of emerging diseases with pandemic potential in the future.

The second significance of this study pertained to the examination of the surveillance, prevention, and control systems of the COVID-9 pandemic in the Thai-Lao cross-border between Ubon Ratchathani province of Thailand and three provinces of the Lao PDR, namely, Champasak, Savannakhet, and Salavan provinces. Ubon Ratchathani province in Thailand shares a direct border with three provinces in the Lao PDR, each having distinct border crossing types and regulations for interactions with their respective Laotian counterparts.

These areas also encompass economic importance, security, the movement of patients and healthcare personnel, and community and social aspects.

This study aimed to find guidelines on efficient and sustainable system management in surveilling, preventing, and controlling outbreaks of infectious diseases in cross-border communities. It focuses on network collaboration and various actors' roles in managing the spread of the coronavirus disease 2019 (COVID-19). The main objectives of the research are as follows:

1. To study the roles of public and private sectors and civil society in creating participatory networks for surveilling, preventing, and controlling the spread of coronavirus disease 2019 (COVID-19) in Thai-Lao cross-border communities.
2. To analyze the potential and strength of the networks of relationships between various actors that contribute to the creation and management system to synthesize the factors affecting the efficiency and sustainability of the management system.
3. To find guidelines on developing the management system for the surveillance, prevention, and control of disease outbreaks in Thai-Lao cross-border communities in the future.

Based on qualitative data collected from November 2021 to October 2022, the research used the network analysis approach to address the cooperation networks between relevant actors and their organizations in Thai-Lao cross-border areas at community, local, national, and international levels. The preliminary hypothesis of the study was that the interaction between relevant actors in terms of their roles and responsibilities in tackling the problem of the COVID-19 pandemic, both in domestic and international areas, lead to the formulation of communication and collaborative networks for surveilling, preventing, and controlling the spread of COVID-19 efficiently and sustainably. The research primarily suggested that focusing only on the cooperation between states might not be enough in dealing with the problem of the COVID-19 pandemic in dynamic zones such as Thai-Lao borders; instead, it insisted that the pandemic preparedness and management could be better understood and improved by using the approach of network analysis.

## Conceptual and analytical framework

This research used a mixed approach of inductive and deductive methods. By reviewing primary concepts of networked governance (inductive), the researchers utilized them to establish the conceptual and analytic framework for defining themes through its interconnections. Then, the researchers conducted area-specific studies through in-depth interviews and focus group discussions involving selected key informants. This was done to address questions within the predefined framework. Subsequently, the study validated the obtained results by plotting them on graphs for analysis according to the objectives outlined in the area-specific data (deductive). The conceptual and analytic framework is provided in Table 1.

**Table 1: Key Concepts Applied for the Analytical Framework**

Concept	Aspect for Analysis
Transnational threats	<ul style="list-style-type: none"> <li>- Challenges and complexity of global issues for states (Smith &amp; Berlin, 2020)</li> <li>- Transnational actors in a globalized world (Britannica, 2016)</li> </ul>
Governance	<ul style="list-style-type: none"> <li>- Cross-disciplinary aspects (Chhotray &amp; Stoker, 2009)</li> <li>- The sum of the many ways involved actors managing their common affairs (Commission on Global Governance, 1995)</li> <li>- Including governmental institutions and non-governmental mechanisms to achieve their collective goals (Chhotray &amp; Stoker, 2010; Lemos &amp; Agrawal, 2009; Rosenau, 1992).</li> </ul>
Networked governance	<ul style="list-style-type: none"> <li>- Cooperation, collaboration, and responsibility among involving actors (Phillips, 2004)</li> <li>- Vertical and horizontal connections among actors in dealing with their shared goals at different levels (Saunier &amp; Meganck, 2009)</li> <li>- Relations between government agencies, non-authoritative actors, interested parties, and transnational actors in different stages of the public policy processes (Whitman, 2005)</li> </ul>
Social network analysis	<ul style="list-style-type: none"> <li>- Methods in analyzing attributes and components of networks in evaluating the ability of networks and their effectiveness of outcomes and closing participatory gaps (Miyazaki, 2011; Reinicke et al., 2000)</li> <li>- Network actors' attributes, capabilities, and power through their structural positions displayed in a network graph (Hafner-Burton et al., 2009; Kahler, 2009)</li> <li>- Strength of links among actors ranging from information sharing, dividing tasks and responsibility, and integrating resources and decision making across organizations (Ferguson, 2009)</li> <li>- Examining components of graph virtualization (Bastian et al., 2009; Brath &amp; Jonker, 2015; Latora et al., 2017)</li> </ul>

The COVID-19 pandemic was classified as a kind of transnational security threat, defined as non-traditional security challenges, including transnational crime, terrorism, maritime piracy, arms trafficking, illegal migration, infectious disease, and environmental degradation. These security threats were cross-borders causing harm to a state's political and social integrity or the health of that state's people (Smith & Berlin, 2020). Transnational threats cannot be confined to a single country due to consequences in transportation and telecommunication of people in the globalizing world (Britannica, 2016). Therefore, individual states could not deal with those threats effectively; cooperation among nations may decline during the pandemic due to landlock and self-reliance policy. Coping with the COVID-19 pandemic should go beyond the concept of government to the concept of governance, which highlights the role of both state and non-state actors in contributing their efforts in managing the system in surveilling, preventing, and controlling COVID-19 in Thai-Lao cross-border communities. The concept of governance is well suited for setting as an analytical framework.

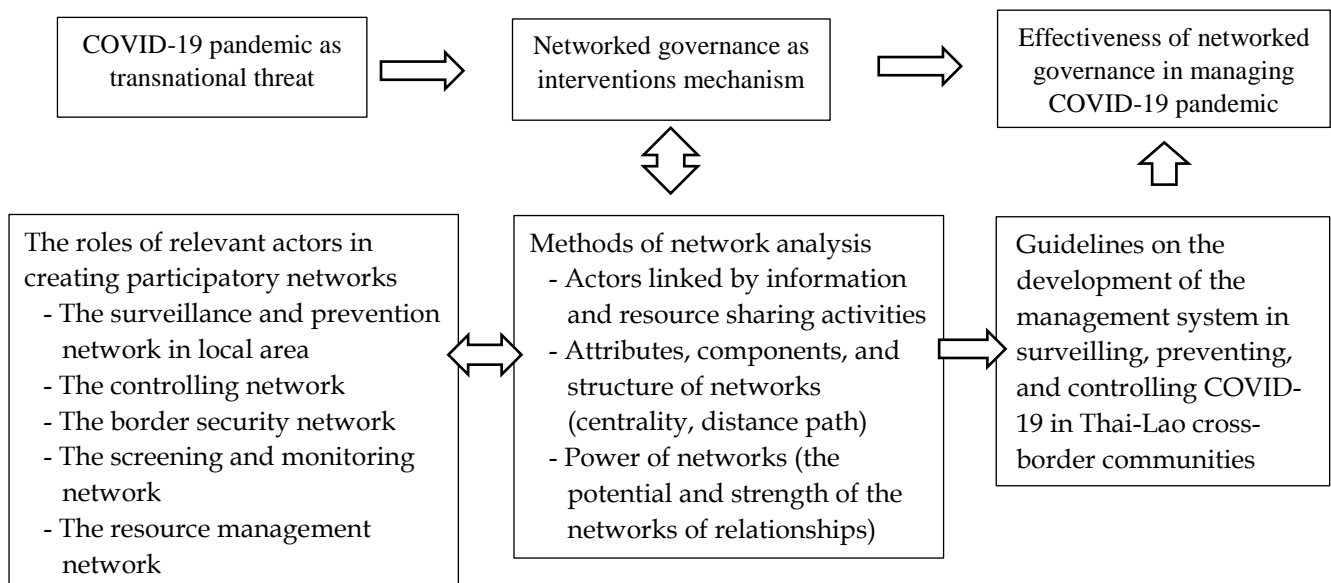
Challenges and complexity of global issues require governance solutions that are not only derived from a cross-disciplinary focus (Chhotray & Stoker, 2009) but also collaboration, coordination, and responsibility sharing for decision-making across public, private, and voluntary sectors (Phillips, 2004). A widely accepted definition of governance is "the sum of the many ways individuals and institutions, public and private, manage their common affairs" (Commission on Global Governance, 1995). The concept is related to power but is not equal to the concept of government because its actions can be at different territorial levels, including international ones (Saunier & Meganck, 2009). While government focuses on activities backed by formal authority and constituted policies, governance emphasizes those

supported by shared goals that may or may not stem from legal entities. The broader scope of the concept of governance has encircled both governmental institutions and non-governmental mechanisms. It provides political space for non-state actors to play their parts contributing to achieving their collective goals (Chhotray & Stoker, 2010; Lemos & Agrawal, 2009; Rosenau, 1992). The concept of governance concerns the relations between government and non-authoritative actors, interested parties, and transnational actors in the public policy processes (Whitman, 2005). Networking among state and non-state is a kind of governance called networked governance in this research. It focuses on collective actions derived from formal and informal cooperative arrangements to manage their concerns and problems.

Collective actions can be operated more effectively through goal-oriented networks' activities in dealing with complex issues. Networks refer to governmental agencies and non-governmental actors interconnected by communication and resource-sharing functions in managing the cooperative system in surveilling, preventing, and controlling the COVID-19 pandemic along Thai-Laos cross-border communities. Cooperation, coordination, and collaboration in the forms of networks are key factors in evaluating the effectiveness of policy outcomes since networks can potentially contribute to improving policy processes and closing participatory gaps (Reinicke et al., 2000). The social power of networks, resulting from the roles of networks in taking collective actions, is a factor in closing governance gaps in policy implementation.

Networks' characteristics and the social network analysis method are applied to assess the impacts of the networks on the cooperative system in surveilling, preventing, and controlling the COVID-19 pandemic along Thai-Laos cross-border communities. Social network analysis is applied in this research to examine networks' qualifications (Ferguson, 2009; Miyazaki, 2011). A graph visualization (Bastian et al., 2009) provides empirical information for analyzing components of networks (Brath & Jonker, 2015; Latora et al., 2017). The concept of governance and the social network analysis methodology contribute to forming this research conceptual and analytical framework in Figure 1 below.

**Figure 1: Conceptual and Analytical Framework**



## Research method

This research is a descriptive analysis. The target populations, as shown in Table 2, were the government officers from the Ministry of Foreign Affairs both in Thailand and the Lao PDR, the Ministry of Interior, the Ministry of Public Health, Local Government Organizations, local Thai and Laos people, and private organizations/civil society in the research areas. Qualitative research methods and the selection of 59 samples from non-probability sampling were applied in this study. The data collection was conducted under human research standards. The research project obtained ethical approval from the Ubon Ratchathani Research Ethics Committee on December 8, 2021 (Reference No. UBU - REC - 127/2564). The researchers addressed ethical concerns throughout all stages of the research.

Data were collected from documentary methods (primary and secondary sources), field studies, in-depth and face-to-face interviews (onsite and online), and focus groups. Regarding validation, the interview transcripts were returned to the research participants after finishing the interview process, and the participants were invited to provide feedback on the data before analyzing the results.

**Table 2:** Summary of Informants

Key Informant	Role	No. Interviewed Identifying by Country of Residence	
		Thailand	Lao PDR
Foreign Affairs Officers in Thailand and the Lao PDR	Governance and Security; International Relations and Border Affairs	1	1
Provincial Officers	Governance and Security; Provincial Administration	2	-
Immigration Officers	Governance and Security; International Relations and Border Affairs	2	-
Chong Mek International Port Health Officer	Public Health; International Relations and Border Affairs	1	-
Customs Officers	Trade and Transportation; International Relations and Border Affairs; Resource Provision	2	-
Public Health Officers	Public Health	5	-
Officers at the District Health Promotion Hospital	Public Health; International Relations and Border Affairs	3	-
Village Health Volunteers	Public Health	10	-
Village Headmen and Subdistrict Headmen	Governance and Security; Resource Provision	6	-
Assistant District Officers	Governance and Security	3	-
Local Administrative Officers	Resource Provision	4	-
Private Sectors and Civil Society Actors (Representatives of the Chamber of Commerce and Buddhist Abbots)	Trade and Transportation; Resource Provision	7	-
Thai and Lao People in Target Communities	Resource Provision	6	6
<b>Total</b>		<b>52</b>	<b>7</b>

Inclusion criteria of key informants in this research were (1) individuals who were over 18 years of age and capable of making independent decisions, and (2) the primary informants were officials working in the field of Thai-Lao border public health or involved in transnational threats. In addition, local Thai and Lao people and non-state actors must reside in the research target areas.

The research areas in this study were Thai villages in Ubon Ratchathani province along the frontier with Laos (Lao People's Democratic Republic). The research used purposive sampling to obtain the sample from three villages: (1) a village in Chong Mek Permanent Border Checkpoint (Sirindhorn District, Ubon Ratchathani province of Thailand) and Wang Tao International Checkpoint (Champasak province of Laos), (2) a village in Khemmarat Trade Relief Point (Khemmarat District, Ubon Ratchathani province of Thailand) and Song Khon (Savannakhet province of Laos), and (3) a village in Ban Pak Sang Permanent Border Checkpoint (Na Tan District, Ubon Ratchathani province of Thailand) and Ban Pak Taphan (Salavan province of Laos). This area was selected under the border closures and the restrictions of inter-provincial travel during the COVID-19 pandemic, e.g., lockdown measures and international border closures. The research period was one year (November 1, 2021–October 31, 2022).

## Research findings

The data were organized into three overarching themes aligned with the research objectives. The study identified subordinate themes within these overarching themes that encapsulated the interview findings. To make the information accessible to those unfamiliar with the Thai language, the interview results were translated into English. Table 3 visually represents the three overarching themes and their corresponding ten subthemes.

**Table 3:** Overarching and Subordinate Themes

Overarching Theme	Subordinate Theme
The Roles of Relevant Actors in Creating Participatory Networks	<ol style="list-style-type: none"> <li>1. The Surveillance and Prevention Network in Local Area</li> <li>2. The Controlling Network</li> <li>3. The Border Security Network</li> <li>4. The Screening and Monitoring Network</li> <li>5. The Resource Management Network</li> </ol>
The Potential and Strength of the Networks of Relationships	<ol style="list-style-type: none"> <li>1. Community Level (Local, District, and Provincial stages)</li> <li>2. Transnational Level</li> </ol>
Guidelines on the Development of the Management System	<ol style="list-style-type: none"> <li>1. Economic</li> <li>2. Public Health</li> <li>3. Border Security</li> </ol>

According to the network graph and data gathered from in-depth interviews and focus groups of key informants, the research objective results are presented as follows.

### The roles of relevant actors in creating participatory networks

Firstly, the research discovered the roles of public and private sectors and civil society in creating participatory networks for surveilling, preventing, and controlling the spread of

coronavirus disease 2019 (COVID-19) in Thai-Lao cross-border communities, which were divided into five categories.

### **The local area network of safety and local health officers**

The local area network of safety and local health officers in surveillance and prevention of COVID-19 comprised subdistrict headmen, village headmen, village health volunteers, and health officers in district health promotion hospitals. This network had primary duties in promoting COVID-19 vaccines and campaigns about the preventive measures of COVID-19, including screening and setting up checkpoint blockades before allowing outsiders to enter the local areas.

*“One of the strengths in managing COVID-19 from the public health perspective is the strong collaboration among key leaders, including the district chief, the hospital director, and the health officer. At the subdistrict level, the village headmen and subdistrict headman all share a close-knit relationship, akin to being part of an extended family. Each of these leaders...form a cohesive network that understands the importance of working together towards a common goal. While not everything is always 100% smooth, we can communicate and engage in discussions, just like brothers and sisters. This unity and collaboration are significant strengths.”*

(In-depth interview, the public health officer, male 59)

### **The network of health officers**

The network of health officers in controlling the spread of COVID-19 included Health Officers in District Health Promotion Hospitals and General Hospitals, District Health Officers, and Officers of Local Administration Organizations. These actors were divided by their roles and responsibilities. For example, Health Officers in District Health Promotion Hospitals and General Hospitals cared for COVID-19-infected cases and established field and temporary hospitals. At the same time, Officers of Local Administration Organizations were responsible for providing places to set up community-based detention centers for COVID-19 infection as well as providing food and necessary equipment for people who are considered potential risk groups and were ordered to isolate to prevent the spread of COVID-19 in the community.

*“During the COVID-19 pandemic, the hospital played a central role in screening, identifying patients, and providing treatment following established public health protocols. This was achieved through official coordination, including convening Public Health Emergency Operation Center (EOC) meetings at the district, hospital, and Contracted Unit of Primary Care (CUP) network levels. At the district level, these meetings were comprehensive gatherings involving all relevant agencies, chaired by the district chief, with the district public health officer serving as the secretary.”*

(In-depth interview, the officer at the district health promotion hospital, female 47)



### **The network of officers in border security**

The network of officers in border security consisted of Immigration Police, Subdistrict Headmen, Village Headmen, Tourist Police, Royal Thai Navies along the Mekong River, Border Patrol Police, Volunteer Defense Corps, Military Officers, Village Security Officers, and Civil Defense Volunteers. This network performed a combination of duties in the border force, i.e., patrolling assigned areas and preventing the spread of COVID-19 from illegal immigrants along border areas. At the operational level, this network is also connected to the communication network and works with Laos officers.

*“When encountering individuals attempting unauthorized entry into the town (from the Lao PDR and Thailand), law enforcement officers and local authorities will coordinate with immigration officers to control and initiate legal proceedings related to their entry. During the outbreak of the COVID-19 virus in 2019, additional steps were taken to collaborate with the staff at the hospital for health checks and follow the public health protocol before repatriating individuals through the international border checkpoint.”*

(In-depth interview, the assistant district officers, male 52)

### **The network of working groups at border checkpoints**

The network of working groups in screening and monitoring the spread of COVID-19 at border checkpoints included Port Health Officers, Customs Officers, Provincial Health Officers, and Immigration Officers. This network had responsibility for information integration and transmission of COVID-19 between Thailand and Laos. It also managed measures on international patient referral and cross-border logistics systems. In addition, it set up security principles for the communities near border checkpoints and cleaning and disinfection measures in the markets near border checkpoints. It provided free COVID-19 ATK test kits to those living near border checkpoints.

### **The network of resource management**

The network of support groups in resource management comprised officers in District Chambers of Commerce, temples, and Local Government Organizations. This network acted as an intermediary in receiving and distributing donations from people, the private sector, and politicians in the areas during the shortages of budgets and equipment from the central authority. They also provided patient transport vehicles and basic supplies kits, including consumable goods and alcohol gel, to the local people during quarantine. Accordingly, this network was informal but crucial because its duty in mobilizing necessary resources has been placed in the center of the horizontal network and resulted indirectly in setting up a system for surveillance, prevention, and control of the spread of COVID-19.

*“The temple, including District Chambers of Commerce and Local Government Organization, played a crucial role in collaborating with relevant authorities to assist in public awareness campaigns, ensuring that residents had knowledge and understanding of how to protect themselves from the spread of the COVID-19 virus. This included providing facilities as vaccination centers for vulnerable groups in the early stages and the public later. They also distributed health masks, face*

*shields, hand sanitizers, temperature measuring devices, and established screening points during various religious ceremonies."*

(Focus group interview, the village health volunteers and subdistrict headman)

The actor who was responsible for the leading role as a center for these five networks is the Provincial Governor. It can be said that this position worked the whole picture in the province's public health and border security. This position had the authority to set the provincial COVID-19 measures and orders for enforcement in the local areas. It is also a center of local working networks. In this case, various agencies were connected to their line, e.g., the agencies responsible for the opening hours at border checkpoints must report relevant issues to the provincial governor. Moreover, this position played a vital role in strengthening cross-border collaboration. It did not only keep the relationship between Thai and Laos governors at the provincial level but also at the district and sub-district levels in various dimensions, e.g., border security (especially in sensitive issues), the promotion of economic and tourism, the development of public health cooperation between provinces and sub-districts in Thailand and Laos during COVID-19.

*"There is a close relationship between (Thailand and the Laos PDR) provincial governors, characterized by mutual assistance and cooperation, even in small matters. During the intense COVID-19 virus outbreak, provincial governors can initiate actions at the local level, such as contacting provincial governors on the opposite side to facilitate collaboration and provide essential items like alcohol-based sanitizers, face masks, and consumer goods."*

(In-depth interview, the Thai provincial officer, male 58)

## **The potential and strength of the networks of relationships**

Secondly, the research analyzed the potential and strength of the relationships between various actors that contribute to the creation and management system to synthesize the factors affecting the efficiency and sustainability of the management system. Since the size of a node, as shown in Figure 2, was drawn from the frequencies of nodes mentioned and confirmed as key actors who had directly communicated and shared resources with other nodes, the larger node represented its functional importance in the networks. At the community level, key nodes showed similarity in having a short path to other nodes at different checkpoints. This meant effective communication among actors that can rapidly pass through information (Ward et al., 2011).

For example, measures formulated by the governor of Ubon Ratchathani and the Provincial Public Health Director were implemented widely and instantly to key nodes at the local level through hierarchical communication, while horizontal communication and resource sharing among private sectors and civil society actors promptly responded to those measures and policies. Horizontal communication among various kinds of actors was informal but crucial for the function of the system in managing the COVID-19 pandemic. Horizontal networks in fundraising and resource pooling were pointed out as a determining factor for the success of the policies implemented at the community level. A lack of resources allocated by the government prevailed in Thailand during the period of the COVID-19 pandemic; however, collaboration among different sectors basically through communication represents the

networks' strength at the local level in facing economic and technical challenges (Hafner-Burton et al., 2009; Weiss, 2000).

The collaboration among actors in the networks was influential to the function of the governmental system in responding to COVID-19 in each community. In contrast, the graph of the structure of the networks shows few transnational links. Only the governor, the provincial public health officials, and state agencies working at the border area were connected to those in Laos. This finding led to a policy recommendation to the provincial governor to play a leading role in developing and enhancing closer relationships with provincial governors in Laos for initiating mutual collaborative activities to strengthen the existing networks or to establish a supportive network among Thai and Lao governmental agencies in mutual concerned areas of cooperation along the border.

### **Guidelines on the development of the management system**

Thirdly, the research found guidelines for developing the management system for the surveillance, prevention, and control of disease outbreaks in Thai-Lao cross-border communities in the future. The border closure at checkpoints heavily and locally affected trade and economy between Thailand and provinces in Laos, namely Salavan province and Savannakhet province. Even though the port of entry between Chong Mek and Wang Tao opened transnationally for referring patients and shipping transportation, state agencies coordinated strictly and mostly on public health and security issues. Continued collaboration and information sharing among governmental agencies during the COVID-19 pandemic can be traced back to the cooperative connections that have been previously developed. Especially in public health coordination, communication flows among public health agencies increased clearly through various communication channels to establish the system to conform with the standards of both Thailand and Laos public health measures during the COVID-19 pandemic. The border closure policy could explicitly mean that an individual state had to be responsible for surveilling, preventing, and controlling the COVID-19 pandemic over its sovereignty. However, formal and informal cooperation between neighboring countries was crucial for better management. Considering the different political and governmental systems between Thailand and Laos during the pandemic, there were governance gaps that both countries could develop in mutually managing transnational infectious diseases in the form of networks of governmental agencies responsible in the concerned areas.

*"The central government of Laos would instruct each district, meaning each (Laos) provincial governor, to coordinate with their respective (Thai) provincial governors opposite their districts for discussions on facilitating the import and export of goods. At that time, it would be up to the (Laos and Thai) provincial governors to negotiate with each other. It's worth noting that the regulations and policies of each district in Laos could vary significantly."*

(In-depth interview, the customs officer, male 53)

Analyzing the structure of the networks in managing COVID-19 from Thailand's side, the governor of Ubon Ratchathani was an essential node who could practically initiate and develop cooperation with the governors in Laos. Forming transnational networks among governmental agencies, including Thai-Lao community leaders, in twin cities along natural borders was considered a critical approach in developing Thai-Lao areas of cooperation at the community and transnational levels. This led to the strength and readiness of a

collaborative system of both countries in responding to any transnational emerging new infectious diseases in the future.



## Discussion

Data on information and resource sharing in governing the system was put into tables provided by Gephi Graph Visualization and Manipulation Software (Bastian et al., 2009) to generate the visualization of the structure of the networks. Each node identified agents responsible for organizational sectors. Nodes were linked by information communication via different channels, including formal letters and mobile applications. This created a graph on information sharing demonstrating the flow of hierarchical commands and horizontal information in implementing measures and policy at different levels with mutual aims to surveil, prevent, and control the COVID-19 pandemic. The size of nodes depends on the frequency of each node referred by other nodes' information sharing. Besides, since some nodes are additionally connected with other nodes, as crucial roles in resource sharing, they form the networks of resource sharing, which significantly affect the effectiveness of the function of the system. The structure of networks (as shown in Figure 2) emphasizes the intensity of communication and collaboration among nodes in different sectors at all levels of governance. Three prominent clusters of the networks demonstrate the significance of the actors in networks at other areas and levels, as described below.

Firstly, the governor of Ubon Ratchathani is the primary and definite center of the structure of the networks in imposing public health, border security, and economic policy and measures during the COVID-19 pandemic. They are firmly linked with other prominent nodes in operating policy and measures at different levels. Since two emphasized areas are security and public health concerns, integrated functions of governmental organizations are carried out. At the provincial level, the governor works closely with the Provincial Health Office and governmental organizations at the Chong Mek International Checkpoint. The Provincial Health Office is mainly responsible for recommending decent health measures to analyze the emergent situations in Ubon Ratchathani.

Policy on border closure also depends on the decision made by the Provincial Communicable Disease Committee, which the governor is the president of in meetings. Governors of provinces in Thailand and Laos can promptly contact each other once security and public health concerns occur. To implement policy at the community level, district chiefs are key nodes to collaborate with local authorities in charge of health measure operations on the ground. Similarly, the hierarchical links between the Provincial Public Health Office, the District Public Health Office, and the District Health Promotion Hospital are clear. Interior officials and public health officials are the backbone of implementing and enforcing the laws and orders at the provincial level under the guidelines given by the National Emergency Operation Centre.

Secondly, at the community level in each district, intense communication occurs among key nodes, including the Village Headman, the Subdistrict Headman, Village Health Volunteers, the Director of the District Health Promotion Hospital, Medical Personnel in the District Hospital, and Local Administrative Authorities. Moreover, since the community is located by the natural border with Laos, there is cooperation on border security among governmental agencies from various organizations, including soldiers, immigration police officers, and village headman teams in paroling for preventing illegal immigration and other transnational crimes. During the COVID-19 pandemic, illicit immigrants can increase risks of local transmission for both countries. Participating organizations have realized their roles and functions in operating the system governing the COVID-19 pandemic.

Once there are obstacles and shortages in resources in achieving the system's goal in the community, the networks of resource sharing in medical equipment and living necessities emerge through fundraising and donations. This kind of network is crucial to the system's success due to inadequate resources in implementing policy. The local administrative organizations, the Chamber of Commerce, and temples in the community should be highlighted for their leading contribution in directly making the system run functionally. They also act as an intermediary between donors and recipients; for example, the chamber of commerce raised funds from the private sector to provide medical equipment for district hospitals.

Thirdly, at Chong Mek International Checkpoint, two specific clusters of networks that operate during border closure are public health networks and international trade and transportation networks. The critical node of these international operational networks is the Chong Mek Port Health Office, which implements measures according to international health regulations. The main task is departure and arrival, screening eleven categories of persons legally allowed to cross the border. Authorities from Ubon Ratchathani Provincial Health Office, Chong Mek Port Health Office, and Chong Mek Customs have to closely coordinate with those in Wang Tao Port of Entry in Laos, Champasak Department of Public Health, Wang Tao Customs, Champasak Hospital, and Salavan Hospital. Transnational cooperation exists as medical protective equipment from the Ubon Ratchathani Provincial Health Office is allocated to hospitals in Champasak and Salavan in Laos.

A comparative study in Ubon Ratchathani at three different kinds of checkpoints has highlighted similarities among the cases. Firstly, the same kind of sectors exist as essential nodes in each cluster of the networks. The key nodes are larger than others since they are densely linked with others who give credit to their roles primarily in communication and function in the system. Due to the limitations of resources in the system, each node hardly has overlapped duties. The divisions of labor among nodes in the networks can be identified.

Moreover, although in the situation of resource insufficiency in managing the system, the requests of necessary needs can be accepted and provided through communication among key network actors. Therefore, this shows that the networks are not only for communicating and coordinating, but they also emerge the networks of resource sharing through nodes' fundraising once the governmental sectors cannot allocate enough resources to operate in the community. This can be considered a complementary factor in sustaining the system's function in governing the COVID-19 pandemic.

## **Policy recommendations and contribution to knowledge**

This research developed two parts of principal policy recommendations. The first is from state agencies implementing policies in the focused areas. To ensure the efficiency of the cooperative system in surveilling, preventing, and controlling the new emerging diseases, necessary and basic information about the new disease should be communicated instantly and widely for promptly and correctly implemented in all sectors. The leading information center at the national level should be established with particular tasks to detect all misunderstood news, to provide the correct information to the public, and to respond to any fake news. In addition, information and technology infrastructure should be prepared and

developed for readiness to manage information effectively. Those recommended infrastructures include the provision of hi-speed wireless internet access for all, the availability of reliable and referable applications which all sectors can access essential information instantly, the preparation of feasible plans of action covering budget, human resources for managing emerging infectious diseases in the future, and the development of Thai-Laos cooperation along the border areas among states' agencies especially in the public health care and related boundary security issues.

The second part of the recommendation is derived from an overall empirical study of this research. Since this research discovers the grand network of coordination, cooperation, and collaboration among key actors horizontally and vertically as actual measures and operations in surveilling, preventing, and controlling the COVID-19 pandemic, two noticeable forms of the networks were traceable. At the community level, actors had strong communication and potential resource-sharing links. At the transnational level, functional connections through information sharing among state agencies at the Chong Mek-Wang Tao International Checkpoint existed for referring patients and drug and shipping transportation across the border. These activities were strictly controlled under the measures imposed by the Provincial Communicable Disease Committee to increase travel restrictions after the arrival of the COVID-19 pandemic.

In parallel to those humanitarian and economic activities, Thai-Laos cooperation on information sharing about security issues was ensured to prevent international crimes and illegal smuggling. These actual factors in operational activities, evidenced by the structure of the networks, emphasize the highest role of the governor of Ubon Ratchathani in initiating, supporting, and mobilizing international cooperation and collaboration with the governors of provinces in Laos. Three approaches to strengthening the Thai-Laos cooperative system in surveilling, preventing, and controlling the new emerging disease in the future are the following.

Firstly, the governor should support and develop the existing operations networks among state agencies, especially bound by a memorandum of agreement (MOA) between provinces in Thailand and those in Laos for a fundamental basis in exchanging information, consulting mutually concerned issues, and undertaking functional activities. For example, previous experience and lessons learned should be exchanged and discussed to prepare to manage the new disease along the Thai-Laos border.

Secondly, although there have often been cultural exchanges between Thai-Laos districts along the Thai-Laos border, the networks of operation at the community level among state agencies between the twin cities where the checkpoints exist should be established primarily to collaborate closely on border affairs, including public health, security, and trade in the form of MOA. These additional functional and operational networks can be initiated only at the provincial level since the governors have full legal authority in governing boundary affairs. In addition, the governor's office should propose a workforce plan to increase international affairs officers in related departments to be responsible for these cooperative dimensions and to support these networks' activities. Preparation is necessary for formulating critical focal points of the networks before the next crisis emerges.

Thirdly, due to substantial economic loss under the impacts of border closure during the COVID-19 pandemic, increasing the port of entry at border checkpoints and standardized public health measures can be a crucial solution to enhance the system's effectiveness in surveilling, preventing, and controlling the infectious disease. This policy recommendation is



derived from people and local authorities at the community level. The country lockdown had caused severe impacts on Thai and Laos people whose lives depended on border trade and transportation. In many cases, Thai-Laos people living in a community across the border are family and relatives. Indefinite border closure, in addition, made people increasingly dissatisfied. Therefore, if functional networks of state agencies can be established and prepared for public health measures to cope with new infectious diseases, people will support the states' order more. Mutually agreed measures between Thai-Laos governmental agencies in establishing a decent procedure for screening protocol at the checkpoint can be a significant alternative to reduce risks from people illegally escaping across the border on the natural ground. This suggestion will balance public health necessities and economic advantages in the Thai-Laos community.

Within the realm of International Politics that focuses on the global state system from numerous scholarly perspectives, this research draws the concepts of Governance, Networked Governance, and Global Public Policy as primary approaches to identify the actual international and transnational activities during Thai-Laos border closure policy that was active in the period of the COVID-19 pandemic. It reveals the understanding of the relationship between neighboring countries during COVID-19 by reaffirming the state's centric policy in the dichotomous categorizing of political systems between democratic government in Thailand and socialism in Laos. Instead of focusing merely on inter-state policy announced by the head of government and the Ministry of Foreign Affairs, actual transnationally operational activities at the border areas between Thailand and Laos shed light on the role of the provincial governor and health office as a centrality of networks in the system management of COVID-19 pandemic concerning international affairs.

In terms of the state's centric policy, the system management in surveilling, preventing, and controlling the spread of the COVID-19 pandemic in Thai-Laos border areas does not only relate to the role of actors in international affairs that reflects the indispensability of state sovereignty and the relationship between states in the inter-state level but also a web of vertical and horizontal administrative governance of the state, local governments, and non-state actors. This confirms the importance of public and private sectors in governing the system, both in the formal function of governmental authorities, e.g., the Ministry of Foreign Affairs, the Ministry of Interior, the Ministry of Public Health, provincial and district hospitals, Local Administrative Organization, and in the complementary function of non-state actors, e.g., local Thai and Laos people, temples, the Chamber of Commerce and private organizations/civil society. Admittedly, there are differences in political systems between Thailand and Laos.

The evidence from this study shows that collaboration and coordination between authorities in the public and private sectors is one of the factors that significantly affected the efficiency and effectiveness of networked governance in the system management of the COVID-19 pandemic. Accordingly, relevant actors should know the chains of power and the structure of political authority in the different political systems between democracy in Thailand and socialism in Laos. Also, they should balance their informal and formal relationships with their networks. This political issue solves the conflict in the lack of resources. It enhances collaboration and coordination in networked governance, e.g., asking personal relationships to engage in COVID-19 essentials donations when a substantial government subsidy has not arrived.

## Conclusions

In studying an approach to developing Thai-Laos cooperation in surveilling, preventing, and controlling the COVID-19 pandemic, collaborations between Ubon Ratchathani province and Champasak province are noticeable in two areas which are the development of the transnational referral patient system and transnational shipment of goods across the Chong Mek and Wang Tao international checkpoints. These kinds of cooperation are derived from relationships and networking among state and non-state agencies that have closely worked in public health and transnational security at the community level. Therefore, this paves the way for a potential opportunity for Thailand and Laos to close the governance gaps in collaborating on public health and border security in parallel. Actively stimulating and increasing the networks among governmental agencies between twin Thai-Laos districts at border checkpoints should be encouraged by the governor of Ubon Ratchathani, who has full authority and a leading role in connecting with provincial governors of Laos to prepare for governmental agencies in operating the cooperative system in mutually governing unexpected transnational infectious diseases in the future.

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