

Article

Information Sharing in Solving an Opium Problem: Multiple-Agency Management with Integration of Online and Offline Channels

Panom Gunawong *  and Wannapa Leerasiri

Faculty of Political Science and Public Administration, Chiang Mai University, 239, Huay Kaew Road, Muang District, Chiang Mai 50200, Thailand; wannapa.l@cmu.ac.th

* Correspondence: panom.gunawong@cmu.ac.th

Abstract: Information-sharing projects in public administration need to pay attention to the organizational stability of the network or communities and the satisfaction of civil users. Therefore, the sustainability of processes and outcomes in resolving the multi-agency problem is necessary. This research aims to explore information sharing in the context of a multi-agency network assigned to eradicate opium cultivation and consumption in Thailand. The research found that three dimensions of management are crucial to the performance of a multi-agency network: firstly, the setting of clear goals; secondly, the balancing of benefits and adequate resources; and thirdly, constructive coordination. In addition, this network applies both online and offline channels in the information-sharing process. At the same time, these two channels have their respective strengths and weaknesses. This network can enhance efficiency and cope with any limitations by integrating both channels. This paper argues that the information-sharing strategy that supports a multi-agency network operation should be integrated between online and offline channels. Moreover, the integration of information-sharing methods is key to the success of a digital government taskforce in providing an efficient network for a long-term problem-solving structure.

Keywords: information sharing; opium; digital government; wicked problem; Line application; social media



Citation: Gunawong, P.; Leerasiri, W. Information Sharing in Solving an Opium Problem: Multiple-Agency Management with Integration of Online and Offline Channels. *Sustainability* **2022**, *14*, 8043. <https://doi.org/10.3390/su14138043>

Academic Editor: Hyunchul Ahn

Received: 24 April 2022

Accepted: 27 June 2022

Published: 30 June 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Drug abuse is genuinely a global problem. Despite an international vow to fight a “War on Drugs”, the production of and market for illicit drugs are growing unstoppably across the globe, and Thailand is no exception. Different kinds and forms of drugs are easier to access in more places than ever before [1,2]. Among them are opium and its processed derivatives, such as morphine, codeine, and heroin; they are among the dangerous narcotics known to humans. The increasing demand for heroin from 2008 to 2012 caused opium production to rise. Production in the Golden Triangle increased 21 percent between 2011 and 2012, and the region’s share of the global market increased from 5 percent in 2008 to 23 percent in 2011 [3].

In Thailand, the poppy is mainly cultivated in the north, particularly in the poor and remote district of Omkoi in Chiang Mai Province. Omkoi is home to ethnic minorities, or hill tribes, primarily the indigenous Karen people. The majority of these people have no access to education and health services. For them, without a legitimate means to earn a living, opium poppy cultivation is the only logical choice for survival. For decades, the Thai government and international agencies have tried to combat poppy cultivation but failed to achieve a sustainable target. A UNODC study shows the scale of poppy cultivation dropped in the late 1990s but began to rebound in 2006 and has continued to climb [4,5]. The problem eludes simple and linear problem-solving strategies and solutions because of its complex nature and causes [6]. One cannot single out a root cause of opium poppy

cultivation and production in northern Thailand. Many factors have contributed to its rise and persistence as a cash crop, including culture, poverty, low education, limited access to health care (opium as a substitute for medicine), advanced transportation, and insufficient knowledge about drug laws [7].

In the case of poppy cultivation and production in Thailand, multiple agencies working independently and unilaterally have shown little progress in all their endeavors. Recently, the Thai government created a multi-agency network to combat the opium problem in the Omkoi District, Chiang Mai Province, which entails eradicating opium production, consumption, and co-modification, as well as the rehabilitation of addicted patients. This project is led by the Office of Narcotics Control Board of Thailand (ONCB) together with the military (Internal Security Operations Command Region 3) and its allies.

For a multi-agency network to succeed, information of good quality is required. This paper reviews Thailand's attempt to combat opium-related problems in the Omkoi District through the theoretical lens of information sharing. In this research, opium is seen as a complicated problem because of its complex and difficult-to-resolve nature. Such a problem cannot be solved by the ONCB, the military, provincial authorities, or local government independently. Therefore, a multi-agency network known as the Centre for the Resolution of Security Problems in Omkoi (CRSPO) was established in 2012 to coordinate different agencies addressing opium-related problems and associated security issues [8]. This research report aims to illustrate the implementation of information sharing for the multi-agency network, which effectively applies offline and online channels to address opium problems in the Omkoi District.

2. Related Literature on Information Sharing

2.1. Multiple-Agency Management

Multiple agencies with different backgrounds and goals need to cooperate on specific goals in an information-related project. The literature on multi-agency management suggests three issues to be addressed. This first issue is to set clear goals, which is crucial to attracting organizations entering into an information-sharing project. Project goals should be consensual among agencies, avoiding conflicts that may lead to negative consequences. The agencies should understand their new roles and responsibilities in project implementation [9]. Further, project goals should be transformed into a detailed, comprehensive plan that lays out the direction before proceeding [10].

The second issue is to balanced benefits and have adequate resources. When agencies participate in an information-sharing project, they must budget their time and efforts. The benefits of cross-agency cooperation should be visible and be commensurate with the anticipated expenditure of resources [9]. Adequate resources must be available to maintain organizations' roles in an information-sharing network. After becoming part of an information-sharing community, agencies will have higher workloads and pressure than before. Resource sharing among agencies can enhance their performance and reduce their resistance to change [10]. The agencies will devote themselves to the project to make sure their expectations for the results are finally met.

The third issue is to ensure coordination between agencies. Through coordination, multiple agencies from different cultures can agree on how and why they work together [11]. Moreover, professional development through training on codes of practice and information-sharing protocols can improve interprofessional trust [12].

CRSPO was formed as a multi-agency taskforce. Therefore, to evaluate its management procedures, this paper will adopt these three criteria to analyze the operation practices of this multi-agency organization.

2.2. Information Sharing in Dealing with Complicated Problems

Information-sharing projects have played a significant role in the administration of the public and private sectors because of their positive outcomes when dealing with complex problems [9]. Organizations enjoy the following benefits from adopting information sharing.

The first benefit is effective action. Dynamic situations, such as natural disasters, require quick responsiveness, and timely information is crucial. When a network of responding agencies receives current information, prompt, appropriate actions can be achieved [10]. The second benefit is problem prevention. When dealing with complicated problems, information from different aspects and perspectives is important for addressing those problems. Florence et al. [13] offered a case study of an anonymized information-sharing project that provided relevant information for public organizations to develop violence prevention strategies. This study showed evidence of the potential benefits of information-sharing partnerships among public agencies within a community. The third benefit is business process improvement. An organization normally has its own information and operations. With cross-boundary information sharing, different agencies can duplicate and manipulate a wider range of information [13], enabling business processes innovation that may help reduce costs and the paperwork burden [14]. The fourth benefit is effective decision making. Integrating information within a network environment can create an effective decision-making process, especially in times of crisis, by reducing administrative burdens [10,15].

From reviewing the benefits of information sharing, the three dimensions of these benefits will be used as the benchmarks in evaluating the performance of the CRSPO.

2.3. Information Sharing and Problem-Solving Network

An information-sharing perspective provides insight into user participation behaviors in communities. Information sharing is fundamental for social capital accumulation, leading to various forms of engagement, participation, and collaboration. Wu [16] concluded that information sharing mediates and builds social capital by creating trust, network ties, and repeated transactions, influencing intent, competitiveness, and improvement. There are various reasons for sharing information and associated behaviors. Information sharing is subject to social, economic, legal, and technological influences. Specifically, Park et al. [17] found that the knowledge of sharing information can enhance the effectiveness of coworking, stimulating the intention to share and perceive knowledge. Further, intention leads to both information-sharing and -seeking behavior. Conroy, Feezell, and Guerrero [18] explored how information shared via online groups has fostered political engagement among citizens. They found that participation via online political groups is significant to offline political participation. This implies that political engagement instigated through political participation is influenced by online political groups. However, such an online platform may not help grant political knowledge due to the low quality of information shared and exchanged via online group discussions.

Sharing and integrating information in multiorganizational cases represent the effectiveness of governance and administration issues. Yang and Wu [19] explored the essences of cross-boundary information sharing in public administration by using a single case study on the Taiwan e-government. While the most influential factor was legislation and policy, others, such as organization, technology, and environment, were relatively less significant but more easily addressed. All factors together provided a complex view of information sharing in interagency settings. Information sharing in multiorganizational settings involves complex social interactions embodied in work processes, organizational forms, and institutional contexts [20,21]. Dawes, Gharawi, and Burke [22] focused on interorganizational information sharing. Networks of knowledge circulation need some supporting issues, such as legal foundation, access to resources, supportive policies, and innovative forms of leadership, to enhance the sustainability of an organization. Knowledge-intensive problems are critical for information sharing to build institutional, managerial, and professional capabilities in engaging cross-boundary operations. These should be deliberately constructed into the organizational and partnering work fabric. Vancauwenberghe, Crompvoets, and Bouckaert [23] demonstrated that information and communication technologies (ICTs) play a key role in public sector transformation by facilitating information sharing across organizational boundaries. They concluded that e-government underpinned

by interorganizational information sharing systems is a driver for the transformation in public administration. Allen, Karanasios, and Norman [24] highlighted key technical and organizational issues in information sharing and interoperability. Interoperability requires technical, organizational, and information capabilities. Information systems should be designed to harmonize policies, procedures, and working practices. Liston, Fischer, and Winograd [25] summarized existing approaches to information sharing and assessed their effectiveness in supporting multidisciplinary decision making.

Therefore, information-sharing projects should respond to policies, procedures, and working practices to reach their problem-solving goals. Moreover, to reach sustainable problem-solving, information-sharing procedures should be able to build institutional, managerial, and professional capabilities in engaging cross-boundary operations.

2.4. Online and Offline Information Sharing

Information-sharing processes that enable, predict, and catalyze sharing practices—especially in online contexts—are the main interest of scholars and practitioners of knowledge management [26]. With the occurrence of social associations of people on the Internet, online communities emerge. Nip [27] examined the autonomy of online communities and their relationships to offline actors, which he found were a variety of tactics and conditioning factors. The most important was the original purpose and the aim of creating an online space. Specifically, trust between offline and online community members determines the success or failure of knowledge sharing. Zhang, Jiang, and Carroll [28] illuminated how the societal impact of social network communication media such as Facebook facilitates and influences community engagement. By examining scenarios where users use Facebook to integrate their online interactions with offline practices, they found that Facebook revealed the social identities of users while broadly facilitating offline activities by proposing and planning activities with insights from reports and comments. Facebook has reinforced and cultivated social identities, social engagement, and social ties.

The organizational use of integrated online–offline information sharing has grown in the past decade in both private and public sectors in an effort to enhance customer services and public satisfaction with e-government services, respectively. Lin [29] took a survey of the impact of online features, e.g., information quality, system quality, service quality, and offline features, on the sustainability of virtual communities. The findings indicated that perceptions of usefulness, ease of use, and offline activities are all determinants of the sustainability of the surveyed virtual communities. Neiger et al. [30] analyzed how local health departments in the US use Twitter to share information, engage with followers, and promote action. The findings showed that the primary use of Twitter facilitates one-way communication on selected topics and information within organizations. As public health transitions to a more dialogic conversation and form of engagement, Twitter can help to create partnerships and participation with audiences with respect to developing corporations in order to reach their organizational goals. Fan and Yang [31] found that offline service quality determines citizens' perceptions of online service quality. Features such as information clarity, system security and stability, interactive services, and “one-stop” services all significantly affect public satisfaction with e-government services. It concluded that online and offline businesses have an integrated influence on citizens' perceptions of service quality. Li et al. [32] argued that online–offline integration satisfies citizens' content as well as social and process gratification and thus determines the success of government social media. On the negative side, online information sharing, especially when using social networks, e.g., Facebook and Twitter, raises privacy and security concerns [33].

From this part of the literature, the sustainability of information sharing concerns the organizational stability of the communities. In contrast, the sustainability of the outcomes of the performance is ignored.

2.5. Outcome of Information Sharing

On the path to successful information sharing, there are many challenges that a network needs to overcome. These problems can be analyzed from several different perspectives. For example, Gil-Garcia Chun and Janssen [10] categorized technical, organizational, political, and legal problems as information-sharing challenges. Information-sharing outcomes are impacted by the lack of political support, lack of financial resources for issues such as citizens' privacy, and inadequate technical literacy. Bharosa, Lee, and Janssen [34] considered information-sharing challenges at two levels of operation—individual organization and community (network) levels. Information sharing at a community (network) level requires each organization in the network to report to a single command center. The coordination is an issue, as each agency has to deal with its own rules depending on the situation, and the rules may differ among the organizations in the network. Information sharing at an individual level may be problematic as workers have a tendency to be on the receiving side rather than being part of bidirectional sharing.

Some scholars have focused on solutions to information-sharing challenges. For example, Dawes and Prefontaine [35] found that members are likely to share and collaborate if a formal understanding of each individual's roles and responsibilities is met. At the same time, organizations in the network must share a common objective to render public services. They also share risks, benefits, and resources. Understanding each other's roles and objectives and shared benefits were found to be a key to successful information sharing among organizations in a particular network.

Most of the work conducted regarding the challenge of information sharing concerns more internal factors while external factors are missing.

3. Case Design and Methods

3.1. The Research Question and Analytical Framework

To conclude the above review of the relevant literature on information sharing and the pernicious opium problem in Thailand, information-sharing research has focused on evaluating the performance of information-sharing communities [10,36], identifying critical success factors [13], and investigating barriers to information sharing in multiple agency networks [37].

With respect to social networks, literature researchers have long discussed the relationship between offline and online communities, but the impacts of existing offline relationships in emerging online interactions are still unclear. For example, Utz et al. [38] found that an offline network reduces the problem of sociability and that the integration of the two is unnecessary in producing successful knowledge sharing. Furthermore, according to the literature, the sustainability of an information-sharing project in public administration is connected to the organizational stability of the network or communities and the satisfaction of civil users. Therefore, the sustainability of the outcomes with respect to resolving the multi-agency problem is lacking.

This paper aims to move one step forward in an attempt to fill in this gap. It will investigate the information-sharing strategy in a project that attempts to solve the complicated opium problem in Thailand. The research question is: How does a multi-agency network integrate offline and online information-sharing channels to address opium problems in the Omkoi District?

Based on the literature reviewed above, we can develop an analytical framework of information sharing by multiple agencies, as shown in Figure 1, which will be used to guide us in addressing this research question. This framework describes the mechanism, in that multiple agencies integrate offline and online channels in information sharing to address a complicated problem.

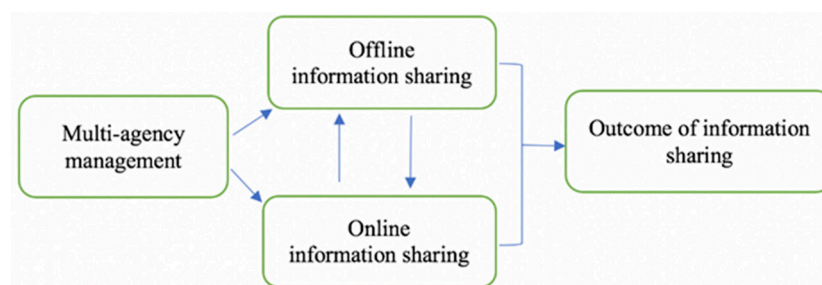


Figure 1. The analytical framework.

3.2. Research Hypothesis

A multi-agency network that integrates both an online and offline channel strategy in information sharing can successfully address a complicated problem.

3.3. Case Design: Opium as a Wicked Problem

The Omkoi District, Chiang Mai Province, is known as one of the last areas of opium cultivation in Thailand. This area is mountainous, located in the southwest of Chiang Mai City, and is about a 5-h drive from the city. Omkoi is the home of indigenous people, primarily the Karen, who are poor. Their villages on top of the mountains are almost impossible to reach by car. Villagers have very limited access to the basic education and healthcare provided by the government; thus, they use opium in remedies for illness. Opium poppy growing, refinement, and consumption in Omkoi District is not a straightforward drug problem, but rather, a problem of the inequality, poverty, and degraded quality of life of the people, one that has been neglected by researchers and the government. The pervasiveness of opium in the Omkoi District can be considered a pernicious problem to which there is no easy answer or one-size-fits-all solution [39]. In the past several decades, Thai authorities have tried different approaches, all of which failed, and the opium problem in Omkoi District persists.

Viewing a complicated problem as complex and persistent, Roberts [6] and Weber and Khademian [40] proposed using a network approach to address it. As a result, in 2009 in Thailand, the National Council on Crime and Delinquency (NCCD), an ad hoc governmental organization, set up a special taskforce, including 23 governmental and non-governmental organizations under the CRSPO title [8] (a list of member organizations can be found in Section 3.4.1). CRSPO is an area-based working group specific to Omkoi that functions as an organizational-based administration. Since the government has classified Omkoi as a special security area, it appointed an Internal Security Operation Commander to serve as the director of CRSPO. CRSPO's mandates entail planning, analyzing, coordinating, monitoring, and reviewing action plans for eradicating opium in Omkoi.

3.4. Target Groups of the Research

3.4.1. The 23 Members of CRSPO

(1) Internal Security Operations Command Region 3; (2) Faculty of Political Science and Public Administration, Chiang Mai University; (3) Narcotics Control Office Region 5; (4) 3rd Army Area; (5) 35th and 36th Ranger Regiment Taskforces; (6) Provincial Police Regions 5 and 6; (7) Provincial Police in Chiang Mai, Mae Hong Son, and Tak; (8) Omkoi and Maetuen police stations; (9) Thanyarak Chiang Mai Hospital; (10) Omkoi Hospital; (11) Chiang Mai Provincial Public Health Office; (12) Omkoi District Public Health Office; (13) Omkoi Village Health Volunteers; (14) Primary Educational Service Area Office 5; (15) The Secondary Education Service Area Office 34; (16) Local government organizations; (17) Omkoi Office of the Non-Formal and Informal Education; (18) Omkoi Monk Association; (19) International Farm Youth Exchange Association of Omkoi; (20) Royal Project, Highland Research and Development; (21) Omkoi District Community Provincial Office; (22) Omkoi Civil Society Network; and (23) Association of Village Chief and Headman, Omkoi.

The primary focus of our study will be on the representatives of each organization who take responsibility for missions regarding CRSPO. However, the representatives may change in person as well as number over the long period of missions. Therefore, from representatives of the 23 organizations, 12 key informants were selected with the criteria that they are the most outstanding, knowledgeable, and active with respect to the information-sharing processes of the project.

3.4.2. Online Information Sharing in Line Social Media Groups

CRSPO members can share information online using the Line Application, a popular instant messaging application among Thai people. This application is a freeware Japanese messaging app that allows users to share pictures, texts, calls, and video conferences and is generally similar to WhatsApp and WeChat. CRSPO created chatrooms, the “Line Groups”, on this platform. This allows members to exchange information instantly via smartphones without the constraints imposed by distance and time. Regarding the online information-sharing practices of CRSPO, there is one core official Line group for representatives from all 23 organizations, and there are more than ten groups for specific characteristics of data, such as security data and sensitive or personal information, in which the members are limited to specific representatives. This research emphasizes collecting data from the core official Line group for representatives from all 23 organizations.

3.5. Research Periods

Since 2016, we have been involved in the CRSPO working group. However, the data collection period for this research was only from October 2017 to December 2019. In addition, the online data collection in the Line group took place from January 2019 to December 2019.

3.6. Data Collection

This research emphasizes information-sharing practices (online and offline channels) and perspectives (practitioners and policymakers) regarding information sharing in multi-agency networks. Therefore, the appropriate research methods are document research, in-depth interview, focus group, and participatory observation. Document research is useful in finding basic knowledge about information sharing, multi-agency management, and information about the Omkoi project. In-depth interviews were used to gather the experiences and perspectives of the key informants. At the same time, focus groups were used to collect common ideas among people in the network. Lastly, participatory observation was conducted to learn the actual practices that happened in the information-sharing project. Consequently, all these methods could cover all dimensions of data that can explain this case. Data collected from different methods were triangulated before use to ensure data validation and avoid biased views [41].

3.6.1. Documentary Research

We reviewed all the six-month and annual work reports of CRSPO. There were five main parts included in the reports, which are: (1) results of past work, (2) current situations update, (3) predicting coming circumstances, (4) summarizing all dimensions of information from 2016 (the year before implementation of the Omkoi Master Plan) to 2019 (the latest year), and (5) updates the next year’s plans.

3.6.2. In-Depth Interviews

We conducted in-depth interviews with 12 key informants from CRSPO member organizations, including both administrators and frontline workers (see Appendix A). The in-depth interviews helped the researchers understand the interviewees’ personal experiences and perspectives on the research phenomenon [42]. We were informed of the information-sharing process and the responsibility of each organization in this process. The interviews were performed based on the situations and activities of the key informants.

For executive officers, the interviews were mostly formal and usually took place at their organization headquarters. The interviews with local administrative leaders and operating officers were mostly conducted at local field sites while the researcher participated in operation taskforces.

3.6.3. Focus Group

The researchers organized three focus groups as follows (see more details in Appendix B).

The first focus group was held on 24 October 2017 at the Faculty of Political Science and Public Administration, Chiang Mai University. The purpose was to discuss opium information sharing to support opium eradication in Omkoi. The attendees were the main people in the committee with respect to opium information strategy.

The second focus group took place on 18 December 2017 with representatives from the key organizations at the Faculty of Political Science and Public Administration, Chiang Mai University. The topic was “Developing data sharing process for sustainable solving opium reduction.” This focus group aimed to understand information-sharing experiences and to exchange ideas in order to develop a more effective information-sharing process among the working group.

The last focus group was held on 11 April 2019, also at the Faculty of Political Science and Public Administration, Chiang Mai University. The attendees were the main members of the committee on opium information strategy, with information technology specialists, IT designers, and scholars. It aimed to understand their various information-sharing behaviors, the specific types of information each unit had, and what else was needed. Moreover, the discussion included an evaluation of information-sharing practices and processes.

3.6.4. Participatory Observations

These methods allowed the researchers to gain access to what happened while interacting with participants in a research context [43]. We considered both online and offline channels of information sharing and sought to understand integration practices.

- Offline observation: We observed and monitored the ongoing, everyday routines of information sharing among members during the process of the implementation of the Omkoi Master Plan. The researchers attended routine meetings and annual evaluation meetings held in both Chiang Mai City and the Omkoi District. The researchers joined some working group meetings and observed their data-sharing process, including aspects such as who is in charge of information sharing [43] and the kinds of information shared among members. The researchers participated in CRSPO training on information sharing. Through group discussions during training, the researchers learned about the member organizations’ needs for information and their concerns related to information and information sharing.
- Online observation: We collected messages on the core official Line group of CRSPO every day from January 2019 to December 2019; a total number of 3202 messages were collected (see Appendix C).

3.7. Data Analysis

Information sharing with respect to opium control in Thailand is a complicated problem that calls for an in-depth case study [42]. We followed the framework in Figure 1 to analyze data. Specifically, we present the storyline of the multiple-agency management with respect to the integration of offline and online channels in information sharing, and we explain the cause and effect within the information-sharing project in the CRSPO case. The collected information was analyzed via the content analysis method [44].

4. Results

The research results are divided into three titles. The first is multi-agency management, the second is the integration of online and offline information sharing, and the last is the outcomes of information sharing. The Table 1 below shows the three main research results and subtitles.

Table 1. Research results.

Main Results	Subtitle
Multi-agency management	Clear goals setting
	Balance benefits and adequate resources
	Constructive coordination
The integration of online and offline information sharing	Offline information sharing
	Online information sharing
	Integration of offline and online information sharing
The outcomes of information sharing	Effective information
	Deconstructing traditional norms of government admirative operation
	Influence the future policy

4.1. Multi-Agency Management

From the investigated information, the authors conceptualized the multi-agency management practices of CRSPO into three fundamental factors: clear goal setting, balanced benefits and adequate resources, and ensuring coordination among agencies.

4.1.1. Clear Goals Setting

It has been nine years since CRSPO's inauguration in 2012. CRSPO still proceeds with its initial missions, mainly eradicating opium poppy production and consumption in the Omkoi area. Since the beginning, CRSPO has gradually evolved. Agencies and personnel in the multi-agency network have been familiarized with each other's missions. During this time, some action plans and/or programs were implemented by each organization separately.

However, researchers noticed interesting changes in the network. The year 2016 was the fifth year of CRSPO, and it was about to draft a new 5-year Omkoi Master Plan (2017–2021). The drafting process started in 2016, approximately the same time this study started. For a year, all organization members, stakeholders, and advisors came together to formulate this new Master Plan and proposed to implement the plan together.

The drafting process had profound effects on CRSPO. These meetings brought all members and stakeholders together, but they also allowed each one to be an integral part of the Master Plan. Organizations were allowed to use these opportunities to present their concerns and needs. The drafting process helped each partner know about each other on a deeper level and helped them see a holistic view of the project. Since the Master Plan started from the ground up, the end product involved all partners' shared visions and missions. The formulation process of a new Omkoi Master Plan overcame the shortcomings of a top-down involuntary network. Sharing processes helped member organizations see a holistic picture of CRSPO and know where each piece of the jigsaw came from. Moreover, a new Omkoi Master Plan laid out this multi-agency network's visions, objectives, strategies, and indicators. When members had clear goals and knew their priorities, it was easier for them to achieve their individual and collective goals.

The first focus group took place on 24 October 2017, whereas the information-sharing operations started at the same time as the operation of the Omkoi Master Plan. The main themes of the discussion emphasized three points. The first was reviewing the nature of

each organization, for example, mandates, working systems, and responsible personnel in the taskforce. The second was about challenges in the working process that could be obstacles to reaching common goals. The third was reviewing the specific roles of each organization as a part of the Master Plan and the cooperative roles that organizations were forming to respond to the various strategies of the Master Plan.

The head of Omkoi district public health office made the point that:

In my opinion, the opium situation has prolonged occurred in this area because local organizations have not really insightful in what they do. After the policy comes down, then they do their jobs, and that is it. They did not concern about what was actually the problem and whether what they had done could solve it. So, the opium problem solution process was not continued and sustainable. The Omkoi Master Plan integrates all involved organizations and sets up the consensus goals and agreements of taking charge in their parts of working together. I can see the good sign of this.

The statement shows that, when members have clear goals and know their priorities, they can collaborate to achieve their individual and collective goals.

The ultimate goals of the Master Plan are for local people to stop planting, trading, and using opium, and to have sustainable occupations in their homeland. The consultant and representative from the Narcotics Control Office Region 5 gave her statement at the first focus group.

The information regarding the occupations to support, I think we have to consider each area's environment first to identify which occupations are suitable for the areas. Suppose we can't set up the goals that local people do willingly. Then we can't motivate them to give us corporation. Finally, we can't sustainably solve this problem. Besides, the occupations that we will support must not go against their way of life or their cultures. So, the information about geographic and demographic factors is also important.

The consultant and the representative of the Narcotics Control Office Region 5 not only asked for cooperation, but also sought a common agreement on the goals. Moreover, she stressed to all the members that the goals of local people are also a significant issue.

Regarding the first issue, which is to have clear goals set for the operations, CRSPO has a distinct advantage. Since 2016, all 23 members of CRSPO have taken part in the process of formulating the Omkoi Master Plan. However, in following the coworking processes of the plan's implementation, there were several problems along the way, such as the practical processes of work, attitudes, and the nature or structures of each organization in the operation. These will be presented in more detail later in the discussion.

4.1.2. Balance Benefits and Adequate Resources

In essence, CRSPO's operations in response to the Omkoi Master Plan (2017–2021) regarding its information-sharing strategy have three main goals: to decrease the opium plantation area in the target communities; to develop effective opium (narcotic) control along with a monitoring system in each target community; and to promote quality of life in the target communities by supporting new ways of making a living, improving society and developing infrastructure.

Therefore, the focus of information shifts from merely opium plantation areas to the plot owners and their communities. This means the basic information extends to capital supporters, traders, users, and also those who are affected by this business. Organizations and people can supply this information, for example, the Narcotics Control Office Region 5, police (local, provincial, and regional offices), local leaders, and schoolteachers. The next operation was to recruit opium users to join the rehab processes. The organizations taking responsibility for these processes are, for example, local governance units, hospitals, public health units, and soldier units. The final process is to convince all people who used to be involved in the opium business to stop and encourage them to have appropriate careers. The organizations acting in this process are, for example, local government units, civil units, education units, and the Royal Project.

The two factors needed to ensure that different organizations can work together are: that the benefits must ensure balanced distribution and that there are adequate resources. Therefore, the operation of the opium eradication program needs continued cooperation from all organizations in the network. Related to the Omkoi Master Plan, there are six strategies to be executed. Each strategy has a number of projects or activities to be covered by its budget. The budget is distributed among subprojects charged by different organizations. In the budget of each project, there are funds for information collecting, analyzing, and sharing. In the case of a budget shortfall, the Narcotics Control Office Region (NCOR) 5, as the managerial organization, can negotiate and supply extra funds.

The example case is related to the role of NCOR 5 in balancing benefits and supplying adequate resources. In 2017, the first year of the plan implementation, there was a conflict regarding information on an opium plantation area in the Maetuen Subdistrict. NCOR 5, the soldier units, and police offices collected information from satellite images and survey information, and they found out, for the first time, that there were about 106 Rai, equal to 169,600 m², of opium plantation fields in the area. After this information was shared, the Maetuen local administrators disagreed with the data. They did not think that there could be that many opium plantation fields in their response area. Thus, all involved organizations agreed to prove the data by traveling to the locations of each opium plot. Because this operation was not in the early plan, it required a lot of unbudgeted money and manpower.

The Narcotics Control Office Region 5 launched a budget for the operation aimed at clarifying and confirming the information. NCOR 5 collaborated with all the organizations in the CRSPO network. These organizations walked to the target areas to talk with the local people. Such activities occur using an extra budget to support needed personnel. Therefore, according to the Omkoi Master Plan, a balancing benefit vis-a-vis resources between organizations is necessary. Moreover, flexible resource management is necessary to facilitate onsite activities. Consequently, all the project resources such as budget, personnel, tools, facilities, and information can be accessed when needed.

As a result of the confirmation operation, they found that the first information miscounted the areas. About 30 percent of the plots identified as opium plots were empty or contained other kinds of plants. This particular case is reflective of the survey institutions, police offices, and soldier units that have long depended on this kind of survey information. In effect, they should be more concerned about coworking with local agencies, including providing needed information. Therefore, the Maetuen Subdistrict has been suggested as a model case for sharing and testing information between different organizations.

Of course, the plan's balance of benefits and adequate resources are ideals. When this does not happen, these organizations compromise while working in the same operations by sharing and exchanging their resources.

4.1.3. Constructive Coordination

CRSPO has succeeded in integrating the diverse characteristics of the organization into its taskforce network. In the beginning, each organization's different perspectives and expertise created some doubt about information and miscommunication among them. Since specific mandates require different forms of information, they collect different dimensions, and this form of information cannot be used or benefit the recipient organizations directly. By learning through experience, each organization understands each other more, as they have different information demands to support different mandates. This leads to constructive coordination.

At present, the information-sharing activities of CRSPO are still developing. The responsible staff from each organization are still not explicitly fixed, and the sharing processes vary. In addition, the types and forms of information also vary, as do the channels of information sharing and exchange. However, this in-progress work has been quite successful, and all CRSPO members are developing a clear system or platform for information sharing in the future. In the process of information sharing, CRSPO

members have developed some common norms for working together: (1) understanding the differences between organizations, (2) accepting the problems of working together and solving them, (3) adapting working methods and developing a common system, and (4) respecting personal rights and equality in the sharing process.

The example case is related to the improvisation of related organizations implementing the same operation and related operations that tried to share their benefits and supply their resources to each other.

According to the policy of the Ministry of Health, one of the main healing methods implemented for opium users who are considered patients is providing methadone, which is considered replacement medicine. Omkoi Hospital and Subdistrict Public Health Hospitals are the hosts of this operation. The hospital will invite patients in their areas to participate. The patients will be investigated, interviewed, and provided methadone.

The representative of the Public Health Hospital of the Maetuen Subdistrict Administration Organization reported that:

I was responsible for information about the opium-addicted patients who were newly registered and follow-up old patients. First, when registering new patients, I will interview and record general information about them. Then I will organize the patient record according to the villages, the sub-districts, and the district. However, this information is restricted. It can only be shared with the sub-group responsible for the rehabilitation process. The challenge of this job is the time limitation. We must work on several things at the same time. We have to receive new patients, monitor symptoms of the old patients and distribute Methadone. So, I requested some staff from relevant organizations to take responsibility for distributing Methadone. Then we will have enough time to collect information faster and more accurately.

This information shows a clear understanding of each organization's job responsibilities and limitations, which provides support for coordinated working and the sharing of resources.

After she reported this to the CRSPO committee at a monthly meeting, the methadone distribution operation was reorganized. Local administrators were appointed to collect personal information, related background, and general information on patients, which they can use for their organizations' benefits. In addition, the soldier units were appointed to keep and distribute methadone since it is a restricted kind of medicine and related to security issues.

The consultant and representative of the Narcotics Control Office Region 5 shared that:

Each organization should collect information more general and useful to other associate organizations in the network. Hence, information sharing will support the network, in general, to plan and follow up activities of the plan. The information on the plan operation of the organizations should also be shared. Then other organizations can learn from each other and develop or improvise their projects in the future. Moreover, the CRSPO network should work on a research project dealing with information collecting, information sharing, and applying in dimensions of obstacles and solving methods. Including sharing methods and sharing channels.

This content shows that the personnel in the network have a positive attitude toward working constructively with associate organizations.

4.2. Integration of Offline and Online Information Sharing

The Omkoi Master Plan focuses on information and information sharing. NCOR 5 is the core organization that acts as the host for information collecting, sharing, and processing, as well as applications using that information. Certain information is needed, especially about opium plantation sites, opium addicts, dealers, a list of patients in rehabilitation programs, etc. Such information is constantly changing; it is very hard to collect, and thus, it needs to be updated often. In addition, information with respect to monitoring the implementation of the project is required.

4.2.1. Offline Information Sharing

- Monthly meeting

Data owners can exchange information related to their respective works through offline channels. In face-to-face meetings, information is shared, collected, validated, and evaluated. The documents distributed and verbal presentations in these meetings are considered official reports, which must be documented according to official regulations, e.g., in minutes. This information is of high quality and integrated by considering its accuracy, completeness, consistency, uniqueness, and timeliness. All CRSPO members are obligated to present their data and work progress to the committee. From these meetings, they receive a “big picture” and an overall view of information, from opium cultivation areas to dealers and addicted patients and from the socioeconomic status of villagers to developmental needs. Moreover, official reports enable the committee to trace data owners if they ever need further information or want to verify a certain piece of information. Official records can also be used in performance evaluation, i.e., to determine the work progress and directions of each unit of the committee. Most importantly, the offline channel is needed if some information is strictly confidential and must be handled discreetly.

- The formal process of information exchange

In general, operating officers collect information from different sources and then make a report. The reports are presented to the upper-level responsible officers, up to the head of the organization. Then, the information is approved and provided to other organizations and outside entities. There are formal procedures in the case of other organizations that want to access the information. Moreover, the person who approves providing the information is the organization’s head.

The public health officer said that:

I don’t have the authority to give patient information to other organizations. I have to ask the doctor who is higher ranking. Otherwise, the organizations have to submit a formal document of information required to the hospital. In some cases, we have to bring the issue to consult with the CRSPO committee at the monthly meeting to determine whether we can provide the information.

According to this public health officer, the information-gathering process and inputting information for computerization usually take from a few days to a week. However, there have been some problems with the database. Thus, the information may wait for input for several months. Omkoi Hospital officers gather raw material to present to the head person to approve and then present it in a monthly meeting. After information is exchanged at the monthly meeting, the heads of each organization will design and assign work for their operating officers. This process of information exchange normally takes about a month to take action.

CRSPO has solved this issue with two methods. The first is identifying sets of information for specific strategy groups. The particular sets of information can be freely exchanged among the strategy group members. The heads of the organizations in each strategy group will consider and make the decision together regarding different kinds of information, especially sensitive information and security information. The second method is dividing the level of organizations and granting authority to access and provide information. For example, village-level organizations, subdistrict-level organizations, and district-level organizations have certain levels or limitations with respect to keeping and providing information.

- Data presentation and data-providing forms

Since the beginning, each organization has had its own frame of data collection and data presentation according to its mandates. When they come to share their information at the monthly meeting, they find out that they also benefit from the information presented by other organizations.

The head of the Omkoi District public health office has stated that:

We have to frame or direct what each organization should present. If each organization decides on what they want to present, that will be good and easy to use their creativity. First, however, we have to ask what kind of information will be useful to share with the network. Then you can present that part of your own organization.

The monthly meeting has become a very fruitful information exchange, and it facilitates discussion among organizations about additional information to extend the scope of the collection, which will benefit the network.

- Follow-up and next-step strategies

According to the Omkoi Master Plan, to sustain the opium reduction program, local communities must have a good quality of life. Hence, good information leads to revealing the basic income of households. Then, projects involved with raising household incomes follow the process of identifying people in opium cycles and help in the rehabilitation of opium users.

People who are identified as being related to opium cycles are mostly opium users. Thus, they are encouraged to join the rehabilitation process. Most of them join, but some deny it. However, information regarding the number and names of these individuals is confidential and changing. Thus, it is hard work for the responsible persons to both aid newcomers and maintain current patients, as well as to push those current patients through the process and be approved for help.

Former opium cycle-related persons who have passed through the habilitation process are supported in order to start their new careers. Some turn to planting other plants, raising pigs and cows, etc. However, these career support strategies are quite delayed because of lacking resources. Furthermore, there are complications in the rehabilitation process. Some opium users return to using opium again, while others start to use amphetamines instead, and some become addicted to methadone. Thus, the list of people who will be helped is not stable. Moreover, some people who should be helped have to wait for a long time. This discourages others who are may wish to join these projects.

The following are examples of career-promoting projects that have been successful. The first one is the eco-tourism project. Chiang Mai University has implemented this project. The village in which the project started is Baan Sor Ae Village. Later, other villages were also included, such as Baan Ya Li Gui Village. The second project is plant replacement. Former opium users turn to planting coffee and highland vegetables. The Forest Protection and Preservation Unit allocates forest areas for them to plant coffee. Thus, they plant coffee under trees in the highland forest. Then, they sell coffee beans to the Royal Project or other buyers. Omkoi coffee has a very distinct taste and has received a number of rewards. The third example is livestock projects. The Omkoi Monk Association seeks cows and buffalo from donations to distribute to former opium users. Some other organizations also help in other roles and projects.

4.2.2. Online Information Sharing

The NCOR 5 representative suggested the following at the second review seminar on the plan's implementation.

Regarding information, we should have clear data collecting methods. Then we can make the most useful of the information in planning and monitoring in the future. Furthermore, we better find a way to share information with all related organizations to know what our network has done so far. Then each organization can move forward on its part of the response. This also can lead to the future vision of plans. Besides, we should have a communication channel that links our teams together, such as the Line group.

After that seminar, CRSPO began to use the Line application as an online channel.

CRSPO has six working groups: the Information Plan Group, Defending Plan Group, Target Area and Person Control Group, Promoting Career and Environment Group, Healing and Rehabilitation Group, and Community-Empowering Group. According to CRSPO's mandates, one of the committee's duties is to hold monthly meetings as well as annual

evaluation meetings to assess the progress of its work. Each working group also has its own meetings. Regarding online information sharing, CRSPO set one chat group in the Line application, and each working group has a separate representation in the Line application. In addition, organizations can exchange information using one-on-one instant messaging services over mobile phones. Safeguards on information access have to be clearly set up, for example, information about medical records.

Key agencies share work-related information through the Line application regarding online information sharing. A chatroom or Line group was created on this platform for CRSPO members to communicate with each other and share information. The Line group investigated for this research was the core group of CRSPO. Normally, the CRSPO Line group has approximately 40–50 members from 23 organizations in the network, including committee administrators, state officers, local politicians, academics, and medical staff, as well as military personnel. Like CRSPO itself, Line group members keep changing due to bureaucratic rotation. The Line application is user-friendly. It can be downloaded to smartphones and is easy to use even for senior officers unfamiliar with the technology. The online platform is active on a daily basis, which helps members feel connected. The exchange of greetings has become routine for some members. Stickers (or emojis) are exchanged, adding a playful flavor to a serious working group. This personalized and cheerful atmosphere within the Line group helps effective information sharing. The platform allows members to share not only short messages but also pictures, short videos, and voice messages. Our study of 3202 messages shared in the CRSPO group found that 564 were text messages, 2479 were pictures, 47 were video clips, 63 were official letters or memos, 17 were document files, and 87 were websites. Regarding content, 412 messages were greetings, 135 were letters between organizations, 1772 were work-related messages, and 863 were messages exchanging information. The six working groups from the other Line groups also reported what activities they take part in within the core CRSPO Line group during work processes.

The Maetuen administrative officer explained that:

Line is to report to the seniors for acknowledgment. The good point is to communicate all the efforts we have been making. The weak point is we can't present in detail such as what we have discussed with the people. So, it can't communicate all information, and some information is restricted.

The following are the advantages, disadvantages, and notification points of using the Line application to share information between CRSPO members.

Advantages:

- (1) There is no hierarchy in the online information-sharing process, and the officers in charge have full authority in the online information-sharing process. This makes the rank-and-file members cooperating in the operation feel comfortable even though some high-ranking or managing officers are in the online network.
- (2) It is an opportunity to share operational processes between organizations. They can see what other organizations have done and how they did it. In addition, local organizations can show their work and compete with other local areas.
- (3) "The members can use the channel as an acceleration tool in coworking contexts when some people report what they have done or their next plans. This can motivate other members to be more active in dealing with their part of the project". The representative of the Maetuen Subdistrict Administrative Organization gave this opinion.
- (4) "In the Line platform, I think we can exchange information quickly. Besides, the information is limited only between the group members". The Omkoi Deputy District representative mentioned this.
- (5) The representative of the Internal Security Operations Command Region 3, the chairman of CRSPO, mentioned that "I joined all the Line gropes and found some significant information for strategic planning in all of them, and the core group is the

best one. Therefore, I think the Line platform is the best and the fastest choice for information sharing. Besides, it is very simple and the easiest to access”.

- (6) The Omkoi District Public Health officer said that “I think stickers are so good. It can express more than words. Like, when I share my work to the group then somebody responses to me as a ‘great’ sticker. I am already happy. I feel encouragement”.
- (7) The Omkoi District Chief mentioned that “sending messages to follow up the works and encourage our members influenced to work achievement.”

Disadvantages:

- (1) CRSPO members mostly use the Line group to share information and report the works that are limited to the group members. At the same time, they use Facebook to create work stories and present their work to the public.
- (2) Some organizations or parts of the works are not shared in the Line group. For example, the Omkoi District Office, the monthly meeting’s administrative organization, does not share the meeting report with the group.
- (3) Information shared in the Line group is not collected. It is removed from the application after some time. Thus, this information is cannot be analyzed for further benefits.
- (4) “Sometimes we share information to report what works we have done, but there is no response. Some people have reflected on the problems that they were facing. Some people read the information, but there was no response. Some people are just greeting daily. It is like this. So, we can partly share information at a certain level and use it for real work. However, the real information, we can’t share on this platform”, the public health officials reported.
- (5) The Maeteun administrative officer shared her experience that “sometimes we went to villages where there is no phone signal. We took photos then sent the photos and reported when we come down to the city”.
- (6) “Sometimes it is annoying and boring. If people keep sending some nonsense things. If we want it to be more useful, we should share significant content”. The representative of Maetuen Subdistrict Administrative Organization reported this.

Notifications:

- (1) There are no regulations or constraints on sharing information in the group. The representative of Maetuen Sub-district Administrative Organization stated that “as it is a group of workers to have frames will provide some formal context and make the information sharing effective”. The representative of Omkoi Hospital commented that “the group provides an opportunity for people to share information but what to share we didn’t set up a frame. People share what they want to share, but there is no guideline about what information to keep, share, and respond”.
- (2) There should be an information-keeping process to collect the shared contents and analyze the information to make it more useful. For example, the Line application allows users to create photo albums to keep the pictures for long periods.
- (3) “There is some issue about privacy and security of the information people share that the group members should be concerned about.” The representative of Nakien Sub-district Administrative Organization expressed this worry.
- (4) The representative of the Nakien Subdistrict Administrative Organization added that “as a local governance unit, we try our best to keep the information limited to the members only. This is government information which should not be opened”. Therefore, this privacy issue is an area of concern
- (5) The representative of the Omkoi District commented that “the administration of the group has invited some practical officers who have nothing to do with decision making into the group. So, there should be an executive group of people for decision-maker level, which is restricted”.
- (6) The Director of Omkoi Hospital said, “We don’t have a data system at the district level. So, it is difficult for staff who are responsible for processing information. We only key the information in the basic forms. Then when we want to use information,

we have to take the information out and audit it. Next time if we want to use the information again, we have to do the same process again before sharing information with the Committee or other organizations. If we have our database, that will be much more helpful”.

4.2.3. Integration of Offline and Online Information Sharing

Even though this online platform helps members of CRSPO feel connected and updated, it cannot replace offline communications. The offline channel occurs in many forms, of which a formal meeting is the most important. These meetings bring all responsible personnel for all member agencies together. They are good opportunities for those involved in CRSPO to get to know one another, creating a very important base for future cooperation and online communications. Members stressed that offline channels permit face-to-face encounters, which establish a real-life connection among members.

However, the efficiency of a multi-agency network is based on constructive coordination between organizations, each with unique and specific skills and expertise. Therefore, organizations in the CRSPO network are found to work together collectively. The collaborative attitudes of the head persons of the organizations who initiated the cooperation process are critical for collaboration in the beginning. However, after working together with the area heads who are also included in the Line application information-sharing groups, they come to better understand the different agendas of the other coworking organizations. As a result, their attitudes might change, and they might more effectively facilitate network operations under the scheme of the Omkoi Master Plan. The CRSPO network has now set up an agreement for information sharing, which specifies goal-setting, guidance for working together, and balancing authority across all organizations. The agreement provides a common understanding of cooperation between organizations in the network and the goals and objectives of information sharing. It also agreed to change the procedure according to new situations in the future. Whereas there is no hierarchy in the online information-sharing process, the officers in charge have full authority in the offline information-sharing process. This makes the practical officers work efficiently in operation without the influence of high-ranking officers in the network.

4.3. Outcomes of Information Sharing

4.3.1. Effective information

In the beginning, CRSPO had problems with information quality (e.g., consistency of information collected by different organizations) and information forms (e.g., the various formats that each organization needed). These problems were solved by promptly adapting the working methods in the collaboration of organizations in the network. The main methods are as follows.

In terms of information accuracy, there is the possibility that information collected onsite is not always accurate. The onsite collaboration between different organizations helps alleviate this issue. Moreover, each organization's network information is cross-checked in communication between the online groups.

(1) Common useful information

In terms of information completeness, a complete set of information for one organization sometimes is not so for other organizations. A set of information collected from one organization may be useful for some organizations but not all. This depends on the relevance of the information to the organizations. The network has communicated and exchanged the requirements of the information needed. Therefore, the effective information collected is suitable for all the associate organizations.

(2) Extended information analysis scope

The information-sharing activities of CRSPO initiate the process of more complex information analysis. This drives the effectiveness of operating the plan. For example, reports show that the number of opium users and cultivation areas has decreed in some

cases. On the other hand, the reports of opium traders being arrested are increasing. Both online and offline information sharing will provide viewpoints from different organizations. Thus, it can be interpreted that opium cultivation has been suppressed in the area. However, there are cases where opium is imported from outside the area.

4.3.2. Deconstructing Traditional Norms of Government Administrative Operation

(1) Cross-organizational communication

There are channels for cross-organizational communication. A person from an organization can share information with all other organizations. This cuts across all formal reporting procedures from the top down before sharing information with other organizations. This provides members from all organizations of CRSPO an environment of competitiveness and cooperativeness while working together. They come to understand more about the different agendas of other coworking organizations.

(2) Hierarchical break down

Since CRSPO has both offline and online channels of information sharing, via the two channels, it is mainly operational officers who share what they have done and what obstacles they are facing with the head persons. As a result, they more effectively facilitate the network operations under the scheme of the Omkoi Master Plan.

(3) Coworking consensus

In operating the Omkoi Master Plan, many obstacles occur in many operations. However, the operators can report their problems; some cases can be solved at the operational level, and some need guidance from the executive level. CRSPO has approved several agreements dealing with some critical issues. For example, the critical condition of information sharing, especially information about medical records, is a personal rights violation. Therefore, restrictions on information access have to be clearly set up. In addition, the agreements provide a common understanding of cooperation between organizations in the network, as well as the goals and objectives of information sharing.

(4) Situated cooperation

The taskforce network streamlines unnecessary processes to enhance coordination for some organizations to access information. In some urgent situations, information requirements or information access can be performed via the online channel. The procedure was designed according to the levels of confidentiality in information sharing.

4.3.3. Influence on the Future Policy

On the one hand, at the policy level, analyzed information regarding specific strategies has to be considered by the leader of every organization dealing with the CRSPO network. On the other hand, all the leaders are also members of the online information-sharing group. Therefore, the leaders also learn about problems that happen at the practical level. Hence, policy in the future concerns pragmatic levels.

The representative of the Omkoi District said that:

Policy at the District level is the intersection between the national policy level and local practical levels. If there is a question from the national level center, we will confirm that we follow national strategies in the local implementations. From implementation levels, we are working on a defensive plan that solves the interface problem. Whereas we also collect information and knowledge to make a database of the opium eradication issue. In addition, the system for collecting, processing, and accessing data will be set up. One of the most important issues is data categorization. The information will be grouped according to topics and areas. There will be district, subdistrict, village, and sub-village levels regarding the areas. My next plan is to plot the target of opium plantation plots, opium sellers, users, and opium quitters on the digital map of our district in clouding relevant information. This database will suggest trends of the problem and contribute to effective plans for the future.

The report of the Omkoi District Chief represents the will to improve the institutions working on the opium eradication project.

5. Discussion

Instead of focusing on theoretical perspectives or evaluating the plan implementation dimension, this research emphasizes “information-sharing practices” in multi-agency operations. Likewise, Peel and Rowley [45] found that the majority of prior research on information sharing in the public sector mostly focuses on the efficiency of information-sharing issues [10,36,45] and investigating barriers to policy development [37,46]. Therefore, this study seeks to contribute to the actual practices and interactions regarding information sharing in multi-agency operations. Scholars in the field of information sharing have agreed that information is the key to success. Roblek et al. [47] highlight that the most crucial four dimensions that the Internet has related to sustainability are development, information, data, and business and services. However, how information is shared, coordinated, and distributed is still in question, especially in the information and communication technologies (ICTs) era. This present study agrees that information is the key to success. However, the right channels for information sharing and constructive practices are equally important. This study shows that both offline and online information-sharing channels must be used alongside each other with flexible network management strategies to reach an optimal objective.

5.1. Multi-Agency Management Perspective

Since the 1990s, a network of knowledge perspective trends has been introduced. Roberts [6] is one of the distinguished scholars who support network approaches. From the literature study, the networks have covered prominent space in the area of public and private governance studies. This paper adds another multi-agency case across the border of bureaucratic structures to solve the common problem in different dimensions in the same area.

As Dawes and Préfontaine [35] stated, the network must share a common objective. In addition, Jongrak and Gunawong [48] and Jongrak [49] state that the network government approach can enhance the efficiency of public administrative units. In 2016, 23 organizations, including CRSPO, which is familiar with the prolonged opium problem in the Omkoi District, designed a plan. They understood the root of the problem and were clear about the plan to solve the problem from their various perspectives. Later on, the government issued a formulated plan as the Omkoi Master Plan. The Omkoi Master Plan was set at the national level and is a part of the national level agenda, and it structured CRSPO as an operational unit, a multi-agency taskforce that is not under the control of any ordinary bureaucratic structure or dominated by political power at the national level. Since network members set the goals together in the process of drafting the plan, the individual organization goals have been integrated with the common goals in the plan. Therefore, the taskforce set a clear goal from the beginning.

As Gil-Garcia, Chun, and Janssen [10] pointed out, there are technical, organizational, financial, political, and legal challenges in information sharing. A number of problems have challenged this network. Of course, the basic challenges regard the balance of benefits and adequate resources. In handling the lack of financial resources to support special issues, key activities are fully budgeted by the Master Plan. Every participating organization has its own agenda with a supporting budget. In addition, the Master Plan mandates NCOR 5 to act as the administrative organization responsible for managing and offering support resources for activities related to facilitating the coworking process, as well as special activities upon request, if reasonable.

Information sharing and its coordination activities have been issues of academic concern. Information sharing among multiple agencies in a common project is crucial, which may involve partnership activities such as sustained and continuous data capture, sharing, and use [13,45,50,51]. Richardson and Asthana [12] highlighted that the different cultures

of various organizations should be involved in coordinating and sharing practices. Bharosa, Lee, and Janssen [34] found coordination in information sharing can face obstacles across the community, the agency, and the individual levels. Organizations should understand each other during working processes so that they may support information sharing. Our case study findings add to this line of literature.

However, these organizations must adapt and compromise their organizational goals to the goals of the plan while working still together constructively. They have their own characteristics. As Powell [50] described, the characteristics of resolution should be flexible, efficient, and innovative. The operational units should be hybrids and encourage participants to act correctly together after working individually. Regarding effective information sharing, monthly meetings and paper information exchange alone cannot unite the network and keep all organizations moving along. NCOR 5 actively reacts to any burdensome situation and introduces innovations to the taskforce, such as suggesting using the Line application for information sharing among the network members. Furthermore, Din, Awan [52] argued for a trust management mechanism, which can separate the positive and negative characteristics of sharing. This is crucial, as this particular network has faced situations where some shared information caused deleterious effects.

5.2. Integration of Offline and Online Information Sharing

Both online and offline channels are important for information sharing. Several offline communication methods took place in this study, including interpersonal communication, document submission, and formal and informal meetings. Dewhirst [53] stated that the selection of communication methods within organizations is influenced by the individual perceptions interrelated with the information-sharing norms of the organizations. As representatives of the organization, officers are presented as members of the network. Originally, they were responsible for collecting information from inside the organization and presenting that information to the head of the organization before sharing it outside via online and offline channels. Information sharing can be from organization to organization or from person to person. On the contrary, some organizations may receive information from other networks or sources. By working together as taskforce teams, operational officers can collect information related to their responsibilities that pertain to the operations of the whole network. In some cases, they collect effective information that can benefit their own organization as well as other organizations in the network, which is useful for the goals of the Master Plan itself. Furthermore, this effective information helps the next steps in disseminating the information, such as processing, analyzing, and interpreting, leading to increased efficiency of information.

For interagency information sharing, the offline channel provides opportunities for data owners to exchange information related to their works. In our case, monthly meetings are most important when information is shared, validated, and evaluated by other members, including exchanges of interest and the differing requirements of each organization. Information presented in these meetings is documented in official reports and approved in the meeting. Through meetings, members can better understand other organizations in the network with respect to the kind of information that is valuable to them.

The online channel, via Line, which is a social communication network, was introduced to connect all group members together to update information and activities that the team has performed. This social network highly supports a coworking context, not only between organizations, but also between operators and executives. As a result, the coworking atmosphere becomes more supportive and competitive, enhancing work performance, understanding, and cooperation.

This case study shows how the integration of both online and offline information sharing enhances the working capacity of the network in the present and in projected future development. Weber and Khademian [40] pointed out that transferring and receiving knowledge or information across participants effectively builds a long-term collaborative problem-solving capacity. The results of this research support this statement. Our findings

also support Bharosa, Lee, and Janssen [34], in that strong interorganizational learning is of critical importance. In addition, Gunawong [54] proposed that social media is an effective tool for coworking in public administration.

5.3. Outcomes of Information Sharing

Information sharing can improve the quality and usefulness of information because the information will be cross-checked and used in different environments. In addition, sharing information among differing associate organizations accelerates the knowledge of that information by organizations so that they may effectively plan, work, and solve problems together.

Ferlie et al. [55] argued that a shift from vertical management to lateral leadership is a significant issue within information-sharing management. Shifting or equalizing hierarchies in interorganizational networks brings about effective public service organizations. Yang, Zheng, and Pardo [36] pointed out that hybrid forms of mixed hierarchy and network service tools help users perceive various vertical and horizontal boundaries. This research further found that flattening the hierarchical statuses of information-sharing members is key to effective information sharing and motivating cooperation. Gil-Garcia, Chun, and Janssen [10] argued that an ability to exchange information across an organization is a prerequisite for a network's success. Information sharing among agencies increases the chance of making the right decision due to the presence of complete information and shared databases. This research found that policymakers joining the network will help provide a more effective policy. Specifically, information sharing has an important role in addressing policy issues [34].

Ferlie et al. [55] argued intra-organization databases have little effect on information-sharing management. Yang and Maxwell [15] had a different viewpoint, with which this research agrees. We found that ICTs have a significant role in effective information sharing. We observed the presence of an online channel could enhance team-based working performance. Communication in online groups helps improve the work of the network, for example, by increasing familiarity among members from different agencies, leading to constructive coordination. In contrast, the participation of the executive members in the group provides an opportunity for them to understand the limitations of policy implementation, and importantly, online information sharing can keep every member up to date and informed in real-time. Ratto [56] stated that devices themselves are not the ultimate goal in decision making, emphasizing shared acts. Instead, the sharing of results and the ongoing critical analysis of materials, designs, constraints, and outcomes are critical. This research added to his point and found that using devices, specifically mobile phones and mobile applications (Line), which the participants have access to and are familiar with, increased the effectiveness of sharing activities. Furthermore, Russ [57] argued that the key to success in reaching sustainability is recognizing that shared knowledge plays a vital role in sustaining and providing successful outcomes. Furthermore, Malik, Khattak [58], interestingly, presented a valuation of various information-sharing platforms by comparing the outcomes.

6. Conclusions

This research found that the integration of offline and online channels of information sharing is the key to success. The Omkoi Master Plan sees information as a vital part of its success. Responsible organizations are encouraged to share their information with their network counterpart. The committee provides opportunities for agencies in the network to present, share, and request information. There are two main channels: online and offline. The study found that both online and offline channels are equally important. Online channels via the Line application help members share information in real-time. Therefore, members are kept updated all the time. This mobile instant message (MIM) system has another strength. It allows communication that cuts across organizational hierarchies and boundaries. MIM can be seen as more relaxed and more playful compared to traditional

bureaucratic communication channels. The offline channel gives opportunities for the organizations in the network to exchange information from their perspectives. There is open discussion across organizations, which allows for a rechecking of information. Each member's high quality of information based on their expertise also helps CRSPO achieve its goals. Information sharing helps each organization have a clear and insightful picture and an open view beyond the organization realm. This practice corresponds to the strategic Master Plan and is important for developing future plans and adjusting plans during implementation.

This paper argues that the key to successful outcomes in the CRSPO network is its information-sharing process between network members, which was created by integrating offline and online channels. The CRSPO network uses Line groups to share their work activities between by each organization and taskforce, which creates interactions between organizations, operational personnel, and executives within the organizations. At the same time, they use offline information-sharing processes, such as the monthly meetings, to share information among organizations. In these events, there are discussions about the problems in the working processes and how to solve them. This network also has outstanding constructive practices and flexible network management strategies. This paper also identifies three outcomes for the effective integration of online and offline information sharing, which are effective information, deconstructing traditional norms of government administrative operation, and influencing future policy.

For future research, additional knowledge aspects are needed for further understanding. The first is the substantive ratio or figure number with respect to the developed performance and efficiency of the network. For example, how fast the online channel can shorten the offline one, how long it takes to act while using both channels together, and how much the plan's budget can be saved using both communication channels. Moreover, with respect to policy suggestions, this information-sharing project can be used as a future metaphor for other multi-agency networks. Though this case portrays the sustainable development tendencies of a local agency network, these practices need to be carried on and developed to be more effective and to ensure long-lasting results. In particular, the new online channel of information sharing is required to set up some regulations or consensuses with respect to sharing information practices in order to reach more effective and nonviolent solutions for human rights issues.

Author Contributions: Conceptualization, P.G.; methodology, P.G.; validation, P.G.; formal analysis, P.G. and W.L.; investigation, P.G. and W.L.; resources, P.G.; data curation, P.G.; writing—original draft preparation, P.G. and W.L.; writing—review and editing, P.G. and W.L.; supervision, P.G.; project administration, P.G.; funding acquisition, P.G. All authors have read and agreed to the published version of the manuscript.

Funding: The authors gratefully acknowledge the support of the Thailand Research Fund (TRF) and Chiang Mai University for funding this research project under the grant number RSA6080080.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A. In-Depth Interviews; a List of 12 Key Informants from CRSPO Member Organizations, including Both Administrators and Frontline Workers

No.	Positions	Date of Interview
1	Special Advisor, Office of the Narcotics Control Board	7 November 2017, 28 November 2017, 11 April 2019, 24 June 2019
2	Public Health Technical Officer, Professional Level, Omkoï District Public Health Office	28 November 2017, 27 June 2019
3	Public Health Technical Officer, Practitioner Level, Omkoï District Public Health Office	28 November 2017, 12 September 2018
4	District Chief of Omkoï	12 September 2018, 25 June 2019
5	Chief Administrator of the Omkoï Subdistrict Administrative Organization	12 September 2018
6	Executive of the Centre for the Resolution of Security Problems in Omkoï (CRSPO).	13 September 2018
7	Plan and Policy Analyst officer, Mae Tuen Subdistrict Administrative Organization	13 September 2018
8	Chief Executive of the Mae Tuen Subdistrict Administrative Organization	13 September 2018
9	Chief Executive of the Na Kian Subdistrict Administrative Organization	11 September 2018
10	Registered Nurse, Omkoï Hospital	11 April 2019, 26 June 2019
11	Deputy Omkoï District Chief	12 September 2018, 11 April 2019
12	Public Health Officer, Omkoï District	11 April 2019

Appendix B. Focus Group: Researchers Organized Three Focus Groups, Listed as Follows

No.	Date/Place	Titles	Participants
1	24 October 2017/Faculty of Political Science and Public Administration, Chiang Mai University	Making agreements and working cooperation consensuses in information sharing to support opium problem mission in Omkoï	Executive of the Centre for the Resolution of Security Problems in Omkoï (CRSPO) No.1.
			Executive of the Centre for the Resolution of Security Problems in Omkoï (CRSPO) No.2.
			Special Advisor, Office of the Narcotics Control Board
			Plan and Policy Analyst, Professional Level, Office of the Narcotics Control Board
			Lecturer of Faculty of Political Science and Public Administration

No.	Date/Place	Titles	Participants
2	18 December 2017/Faculty of Political Science and Public Administration, Chiang Mai University	Developing data sharing process for sustainable solving opium reduction	Special Advisor, Office of the Narcotics Control Board
			Representative of the Narcotic Crops Survey & Monitoring Institute, Office of the Narcotics Control Board
			Representative of the Omkoi District Public Health Office
			Representative of the Local Government Organization
			Representative of the Office of the Non-Formal and Informal Education
			Representative of the Forest Resource Management Office 1 (Chiang Mai) No.1
			Representative of the Forest Resource Management Office 1 (Chiang Mai) No.2
			Lecturer of Faculty of Political Science and Public Administration
			Centre for the Resolution of Security Problems in Omkoi (CRSPO)
			Police Officer, Omkoi District
3	11 April 2019/Faculty of Political Science and Public Administration, Chiang Mai University	Exchanging experiences and evaluation of information-sharing practices and processes.	Representative of the Mae Tuen Subdistrict School, Omkoi District, Chiang Mai Province.
			Representative of the Highland Research and Development Institute (Public Organization)
			Lecturer of Faculty of Political Science and Public Administration
			Deputy Omkoi District Chief
			Special Advisor, Office of the Narcotics Control Board
			Registered Nurse, Omkoi Hospital
			Public Health Technical Officer, Professional Level, Omkoi District Public Health Office

Appendix C. Online Observation: We Collected Messages from the Core Official Line Group of CRSPO Every Day from January 2019 to December 2019, with a Total Number of 3202 Messages Being Collected

No.	Month	Message	Type of Messages							Type of Communication															
			Text	Picture	Video	Sticker	Official Document	File	Website	Greeting				Coordination			Report Operating Results			Data Sharing					Total
										General Greeting	Important Days	Teachings/ Quotes	Total	Official Document	Reporting	Total	Report Results	Send Documents	Total	Educate	Inform	News	Chatting	Share Stories	
1	January	357	77	237	6	27	3	0	11	76	9	2	87	3	17	20	171	0	171	3	18	3	52	3	79
2	February	486	97	342	3	53	7	0	1	73	5	1	79	0	3	3	259	0	259	0	62	1	76	6	145
3	March	511	92	363	1	45	0	1	19	58	3	4	65	2	14	16	360	0	360	1	0	5	5	59	70
4	April	35	12	20	0	10	0	0	0	7	0	0	7	0	0	0	6	0	6	0	0	0	21	1	22
5	March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	January	330	51	197	7	32	29	7	7	37	0	0	37	51	2	53	113	0	113	3	65	12	28	19	127
7	July	467	59	424	6	25	11	0	13	37	3	5	45	2	1	3	247	0	247	5	69	15	52	31	172
8	August	555	81	425	13	37	7	7	12	38	1	2	41	0	19	19	394	5	399	0	16	11	8	61	96
9	September	333	71	362	5	28	6	2	15	37	1	0	38	2	26	28	160	0	160	5	13	5	79	5	107
10	October	72	8	41	2	16	0	0	5	4	1	0	5	0	0	0	47	0	47	0	0	17	0	3	20
11	November	24	6	21	1	2	0	0	3	1	1	0	2	0	12	12	4	0	4	0	1	4	0	1	6
12	December	32	10	47	3	1	0	0	1	0	6	0	6	0	1	1	6	0	6	0	2	3	9	5	19
Total		3202	564	2479	47	276	63	17	87	368	30	14	412	60	95	155	1767	5	1772	17	246	76	330	194	863

References

1. Stares, P.B. *Global Habit: The Drug Problem in a Borderless World*; Brookings Institution Press: Washington, DC, USA, 1996.
2. Leechaianan, Y.; Longmire, D.R. The use of the death penalty for drug trafficking in the United States, Singapore, Malaysia, Indonesia and Thailand: A comparative legal analysis. *Laws* **2013**, *2*, 115–149. [CrossRef]
3. UNODC. The World Drug Report. 2012. Available online: https://www.unodc.org/documents/data-and-analysis/WDR2012/WDR_2012_web_small.pdf (accessed on 15 December 2015).
4. Laohong, K.-O. Country prepares for new poppy war. *Bangkok Post*, 5 March 2016.
5. UNODC. Southeast Asia Opium Survey 2015. 2015. Available online: https://www.unodc.org/documents/crop-monitoring/sea/Southeast_Asia_Opium_Survey_2015_web.pdf (accessed on 15 December 2015).
6. Roberts, N. Wicked problems and network approaches to resolution. *Int. Public Manag. Rev.* **2000**, *1*, 1–19.
7. Cheurprakobkit, S. The drug situation in Thailand: The role of government and the police. *Drug Alcohol Rev.* **2000**, *19*, 17–26. [CrossRef]
8. Jongruck, P. From bureaucracy to (mandated) network: A changing approach to opium eradication in Northern Thailand. In Proceedings of the 15th International Research Society for Public Management Conference, Birmingham, UK, 30 March–1 April 2015.
9. Gil-Garcia, R.J.; Chengalur-Smith, I.; Duchessi, P. Collaborative e-Government: Impediments and benefits of information-sharing projects in the public sector. *Eur. J. Inf. Syst.* **2007**, *16*, 121–133. [CrossRef]
10. Gil-Garcia, J.R.; Chun, S.; Janssen, M. Government information sharing and integration: Combining the social and the technical. *Inf. Polity* **2009**, *14*, 1–10. [CrossRef]
11. Scholl, H.J.; Kubicek, H.; Cimander, R.; Klischewski, R. Process integration, information sharing, and system interoperability in government: A comparative case analysis. *Gov. Inf. Q.* **2012**, *29*, 313–323. [CrossRef]
12. Richardson, S.; Asthana, S. Inter-agency information sharing in health and social care services: The role of professional culture. *Br. J. Soc. Work* **2005**, *36*, 657–669. [CrossRef]
13. Florence, C.; Shepherd, J.; Brennan, I.; Simon, T. Effectiveness of anonymised information sharing and use in health service, police, and local government partnership for preventing violence related injury: Experimental study and time series analysis. *BMJ* **2011**, *342*, d3313. [CrossRef]
14. Landsbergen, D., Jr.; Wolken, G., Jr. Realizing the promise: Government information systems and the fourth generation of information technology. *Public Adm. Rev.* **2001**, *61*, 206–220. [CrossRef]
15. Yang, T.-M.; Maxwell, T.A. Information-sharing in public organizations: A literature review of interpersonal, intra-organizational and inter-organizational success factors. *Gov. Inf. Q.* **2011**, *28*, 164–175. [CrossRef]
16. Wu, W.-P. Dimensions of Social Capital and Firm Competitiveness Improvement: The Mediating Role of Information Sharing. *J. Manag. Stud.* **2008**, *45*, 122–146. [CrossRef]
17. Park, J.H.; Gu, B.; Leung, A.C.M.; Konana, P. An investigation of information sharing and seeking behaviors in online investment communities. *Comput. Hum. Behav.* **2014**, *31*, 1–12. [CrossRef]
18. Conroy, M.; Feezell, J.T.; Guerrero, M. Facebook and political engagement: A study of online political group membership and offline political engagement. *Comput. Hum. Behav.* **2012**, *28*, 1535–1546. [CrossRef]
19. Yang, T.-M.; Wu, Y.-J. Exploring the determinants of cross-boundary information sharing in the public sector: An e-Government case study in Taiwan. *J. Inf. Sci.* **2014**, *40*, 649–668. [CrossRef]
20. Dawes, S.S. Interagency information sharing: Expected benefits, manageable risks. *J. Policy Anal. Manag.* **1996**, *15*, 377–394. [CrossRef]
21. Dawes, S.S.; Cresswell, A.M.; Pardo, T.A. From “need to know” to “need to share”: Tangled problems, information boundaries, and the building of public sector knowledge networks. *Public Adm. Rev.* **2009**, *69*, 392–402. [CrossRef]
22. Dawes, S.S.; Gharawi, M.A.; Burke, G.B. Transnational public sector knowledge networks: Knowledge and information sharing in a multi-dimensional context. *Gov. Inf. Q.* **2012**, *29*, S112–S120. [CrossRef]
23. Vancauwenberghe, G.; Crompvoets, J.; Bouckaert, G. Interorganizational information sharing as a driver of change in public administration. *NISPAcee J. Public Adm. Policy* **2011**, *3*, 87–106.
24. Allen, D.K.; Karanasios, S.; Norman, A. Information sharing and interoperability: The case of major incident management. *Eur. J. Inf. Syst.* **2014**, *23*, 418–432. [CrossRef]
25. Liston, K.; Fischer, M.; Winograd, T. Focused sharing of information for multidisciplinary decision making by project teams. *J. Inf. Technol. Constr.* **2003**, *6*, 69–82.
26. Rafaeli, S.; Raban, D.R. Information sharing online: A research challenge. *Int. J. Knowl. Learn.* **2005**, *1*, 62–79. [CrossRef]
27. Nip, J.Y. The relationship between online and offline communities: The case of the Queer Sisters. *Media Cult. Soc.* **2004**, *26*, 409–428. [CrossRef]
28. Zhang, S.; Jiang, H.; Carroll, J.M. Integrating online and offline community through facebook. In Proceedings of the 2011 International Conference on Collaboration Technologies and Systems (CTS), Philadelphia, PA, USA, 23–27 May 2011.
29. Lin, H.F. The role of online and offline features in sustaining virtual communities: An empirical study. *Internet Res.* **2007**, *17*, 119–138. [CrossRef]
30. Neiger, B.L.; Thackeray, R.; Burton, S.H.; Thackeray, C.R.; Reese, J.H. Use of twitter among local health departments: An analysis of information sharing, engagement, and action. *J. Med. Internet Res.* **2013**, *15*, e2775. [CrossRef] [PubMed]

31. Fan, J.; Yang, W. Study on e-government services quality: The integration of online and offline services. *J. Ind. Eng. Manag.* **2015**, *8*, 693–718. [\[CrossRef\]](#)
32. Li, Y.; Yang, S.; Chen, Y.; Yao, J. Effects of perceived online–offline integration and internet censorship on mobile government microblogging service continuance: A gratification perspective. *Gov. Inf. Q.* **2018**, *35*, 588–598. [\[CrossRef\]](#)
33. Kim, H.-S. What drives you to check in on Facebook? Motivations, privacy concerns, and mobile phone involvement for location-based information sharing. *Comput. Hum. Behav.* **2016**, *54*, 397–406. [\[CrossRef\]](#)
34. Bharosa, N.; Lee, J.; Janssen, M. Challenges and obstacles in sharing and coordinating information during multi-agency disaster response: Propositions from field exercises. *Inf. Syst. Front.* **2010**, *12*, 49–65. [\[CrossRef\]](#)
35. Dawes, S.S.; Prefontaine, L. Understanding new models of collaboration for delivering government services. *Commun. ACM* **2003**, *46*, 40–42. [\[CrossRef\]](#)
36. Yang, T.-M.; Zheng, L.; Pardo, T. The boundaries of information sharing and integration: A case study of Taiwan e-Government. *Gov. Inf. Q.* **2012**, *29*, S51–S60. [\[CrossRef\]](#)
37. Fedorowicz, J.; Gogan, J.L.; Culnan, M.J. Barriers to interorganizational information sharing in e-government: A stakeholder analysis. *Inf. Soc.* **2010**, *26*, 315–329. [\[CrossRef\]](#)
38. Utz, S.; Matzat, U.; Snijders, C. On-line reputation systems: The effects of feedback comments and reactions on building and rebuilding trust in on-line auctions. *Int. J. Electron. Commer.* **2009**, *13*, 95–118. [\[CrossRef\]](#)
39. Tödtling, F.; Trippel, M. One size fits all?: Towards a differentiated regional innovation policy approach. *Res. Policy* **2005**, *34*, 1203–1219. [\[CrossRef\]](#)
40. Weber, E.P.; Khademian, A.M. Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. *Public Adm. Rev.* **2008**, *68*, 334–349. [\[CrossRef\]](#)
41. Maxwell, J.A. *Qualitative Research Design: An Interactive Approach*; Maxwell, J.A., Ed.; Applied Social Research Methods Series; Sage: Los Angeles, CA, USA; London, UK; New Delhi, India; Singapore; Washington, DC, USA, 2013; Volume 41.
42. Kuhlicke, C. Resilience: A capacity and a myth: Findings from an in-depth case study in disaster management research. *Nat. Hazards* **2013**, *67*, 61–76. [\[CrossRef\]](#)
43. Waddington, D. *Participant Observation, in Essential Guide to Qualitative Methods in Organizational Research*; Cassell, C., Symon, G., Eds.; Sage: Thousand Oaks, CA, USA; London, UK; New Delhi, India, 2004; pp. 154–164.
44. Denzin, N.K.; Lincoln, Y.S. *The Sage Handbook of Qualitative Research*; Sage: Thousand Oaks, CA, USA, 2011.
45. Peel, M.; Rowley, J. Information sharing practice in multi-agency working. In *Aslib Proceedings*; Emerald Group Publishing Limited: Bingley, UK, 2010.
46. Riege, A.; Lindsay, N. Knowledge management in the public sector: Stakeholder partnerships in the public policy development. *J. Knowl. Manag.* **2006**, *10*, 24–39. [\[CrossRef\]](#)
47. Roblek, V.; Meško, M.; Bach, M.P.; Thorpe, O.; Šprajc, P. The Interaction between Internet, Sustainable Development, and Emergence of Society 5.0. *Data* **2020**, *5*, 80. [\[CrossRef\]](#)
48. Jongruck, P.; Gunawong, P. Network governance: Implications for development. In *Handbook of Development Policy*; Edward Elgar Publishing: Cheltenham, UK, 2021.
49. Jongruck, P. Network governance and the contemporary opium problem in northern Thailand. *Asian Educ. Dev. Stud.* **2019**, *8*, 364–374. [\[CrossRef\]](#)
50. Powell, W.W. Learning from collaboration: Knowledge and networks in the biotechnology and pharmaceutical industries, California management review. *Knowl. Groupw. Internet* **1998**, *40*, 228–240.
51. Mishra, J.L.; Allen, D.K.; Pearman, A.D. Information sharing during multi-agency major incidents. *Proc. Am. Soc. Inf. Sci. Technol.* **2011**, *48*, 1–10. [\[CrossRef\]](#)
52. Din, I.U.; Awan, K.A.; Almogren, A.; Kim, B.-S. ShareTrust: Centralized trust management mechanism for trustworthy resource sharing in industrial Internet of Things. *Comput. Electr. Eng.* **2022**, *100*, 108013. [\[CrossRef\]](#)
53. Dewhirst, H.D. Influence of perceived information-sharing norms on communication channel utilization. *Acad. Manag. J.* **1971**, *14*, 305–315.
54. Gunawong, P. Open government and social media: A focus on transparency. *Soc. Sci. Comput. Rev.* **2015**, *33*, 587–598. [\[CrossRef\]](#)
55. Ferlie, E.; Fitzgerald, L.; McGivern, G.; Dopson, S.; Bennett, C. Public policy networks and ‘wicked problems’: A nascent solution? *Public Adm.* **2011**, *89*, 307–324. [\[CrossRef\]](#)
56. Ratto, M. Critical making: Conceptual and material studies in technology and social life. *Inf. Soc.* **2011**, *27*, 252–260. [\[CrossRef\]](#)
57. Russ, M. Knowledge Sharing and Sustainable Development. *Sustainability* **2022**, *14*, 3078. [\[CrossRef\]](#)
58. Malik, F.M.; Khattak, H.A.; Almogren, A.; Bouachir, O.; Din, I.U.; Altameem, A. Performance evaluation of data dissemination protocols for connected autonomous vehicles. *IEEE Access* **2020**, *8*, 126896–126906. [\[CrossRef\]](#)