

Participation In Agri-Food Safety Collaborative Network: An Example From Songkhla Province, Thailand

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ABSTRACT

We conducted this case study in Songkhla Province in Thailand, with the aim of exploring the participation in a collaborative network for food safety. This study was conducted using a qualitative approach, with data collected from 15 representatives of various group leaders within the network. Participatory observation was used to cross-validate the data obtained, and content analysis to analyze the collected data. The study found that the goals of the agri-food safety collaborative network are self-reliance, resource conservation, food security, and health. The main purpose of the network is to develop a system for food-safety management, consisting of three connected systems: a fair and self-sufficient production system, a fair and sustainable marketing system, and an appreciative consumption. There are four supporting mechanisms for encouraging participation in the network: network management, coordination, mutual learning, and communication. We found that participation is a social learning process. The three systems of agri-food safety management focus on participation to encourage intra- and inter-group mutual learning of the network. The social capital existing in the area, especially, the civil society network and the knowledge therein, are key factors for building a collaborative network as a tool for the participation of the public and private sectors in the broader term of food safety.

Keywords: Agriculture and Food Safety; Collaborative Network; Participation; Social Learning

INTRODUCTION

Although its industrial sector is expanding rapidly, Thailand is still considered an agricultural country. About 35.1% of the total area in Thailand is comprised of cultivation and about 33.7% of the total population in the country or 21.4 million people belong to agricultural households. Approximately 60% of the total national workforce is currently engaged in agriculture (National Statistical Office of Thailand, 2008). Thailand is the one of the world's major food exporters (Food and Agriculture Organization of the United Nations (FAO), 2000); therefore, it focuses on quality and safety of food production in response to the high standards in many countries. Due to the food crisis around the world, food quality and safety have become an important issue. In Thailand, as in many Asian countries, the rapid socio-economic development was accompanied by a modernization of agri-food production. The government has promoted an industrial, export-oriented agriculture characterized by heavy reliance on synthetic chemicals to protect crops against weeds, pest, and diseases, leading to improved productivity (Roitnerschobesberger, Darnhofer, Somsook, & Vogl, 2008). Attention to food risk associated with a chemical-based agriculture by intensive agricultural practices and their potential effects on human health as well as on the environment by nation-states and international organizations has been increasing. Nation-states have taken various efforts to cope with this issue, for instance via more stringent regulations on food production, food industry, and imports (Van Hoi, Mol, & Oosterveer, 2009). However, in the recent decade, the amount of imported pesticide has increased, including in Thailand, making it one of the most agro-chemical intensive countries in the Southeast Asian region. From 2002 to 2009, the amount of imported pesticide has increased roughly threefold from 39,634 tons to 118,152 tons (Office of Agricultural Economics, 2011). The

significant use of agro-chemicals is believed to pose risks to food consumption and negatively affect the environment.

Food safety is a broad term pertaining to the assurance that food will not cause harm to its consumers when prepared or eaten according to its intended use (Raspor, 2008). In response to trends in food safety, since 2004, the Thai government has implemented a food safety policy using the slogan “Safe food from the Thai kitchen to the world” (Thailand Board of Investment [BOI], 2010), which encourages all sectors of society to participate in the systematic and integrated management of food safety, or, in other words, the operational coordination among all involved sectors in the food safety system. “From farm to table” is an approach for ensuring that food is free from food-borne hazards, from pesticides and industrial chemicals to unwanted bacteria and contaminants. Agricultural practice is at the core of the food safety system, and can be managed using appropriate production resources for sustainable agriculture to ensure the quality of the products used as ingredients in processed foods. Meanwhile, the end of the system is managed by improving the quality of the products according to the standards of both the domestic and the international markets. The key food safety issues include strengthening each link in the complex process of delivering food to the consumers, and sharing the responsibility for providing safe food among all the key participants in the food and agriculture sector, from food producers to retailers and consumers.

The Thai government’s food safety policy is overseen by two main agencies: the Ministry of Agriculture and Cooperatives and the Ministry of Public Health. The Ministry of Agriculture and Cooperatives has set the guidelines of operation for the inputs in the production process in farms through the Good Agricultural Practice (GAP) certification. Meanwhile, the Ministry of Public Health has set the guidelines of operation for the safety of imported foods, and their processing, distribution, product development, through the Good Manufacturing Practice (GMP) and the Hazard Analysis and Critical Control Point (HACCP) certifications, which monitor the residues and building capacity of the consumers in cooperation with local government organizations. However, despite the involvement of many public and private agencies in the food safety system, the various government agencies are governed by several laws and regulations and are largely separate from each other, making it difficult for producers, retailers, and consumers to participate in the policy process including policymaking, implementation, and evaluation. In past decades, the food safety policy had been based on a government-mandated, top-down policy process, and mostly focused on food control. However, the food safety system has complexities associated with the lifestyles and attitudes of people in the food supply chain. Thus, the sustainable management of food safety needs a social learning process through the collaborative network of food supply chain, which pertains to the policy collaboration of all stakeholders from the public and the private sectors, and non-governmental organizations (NGOs).

A paradigm shift is occurring in the way the government, business, and community sectors relate to each other, challenging each to redefine their respective roles and responsibilities (Edwards, 2001). Government agencies and public officials are often unclear about what they expect public participation to accomplish, and citizens might be puzzled as well. Some agencies feign interest in public involvement in order to appear to be doing the “right thing” and to comply with legal mandates. However, they greatly limit the degree to which citizens can affect decision making. They may do so because they do not trust citizens’ capacity to understand issues and participate with a sufficient degree of competence. In response, some analysts have suggested that there are four quite different models for citizen involvement, which have increasing degrees of public influence on decision making: the commentary model, the social learning model, the joint planning model (collaborative work), and the consent and consensus model (sometimes known as deliberative democracy) (Kraft, 2010). Collaborative networks have evolved as a key strategy in making and implementing public policy. The reason for the prevalence of networks is to solve the failures in traditional, command-and-control, bureaucratic approaches, which have created an incentive to find new ways of more effective and flexible public-services delivery. Collaborations with diverse partners may be helpful in extending government interventions and increasing the steering capacity of public programs. In resource dependency, partners can exchange the information and/or expertise needed for a more effective implementation of public programs (Krueathep, 2008).

Songkhla, the southern province of Thailand, founded the network of civil society on sustainable agriculture in 1983 and the food safety collaborative network in 2008, which consists of various sectors in the food supply chain. In this collaborative network, various sectors fully cooperate in the food cycle to develop knowledge

of sustainable agriculture, maintain environmental resources, and build relationships between producers and consumers for sustainable growth.

OBJECTIVE

We conduct a case study in Songkhla, the southern province of Thailand, with the aim to explore the participation in a collaborative network for agriculture and food safety at the local level.

METHODOLOGY

This study was conducted using a qualitative approach to explain the pattern of agri-food safety management and the supporting mechanism for the participation of the stakeholders in a collaborative network of agri-food safety.

The study area

Songkhla is a major portal city in southern Thailand. It is ranked as the twenty-seventh largest province in the country and the third in southern Thailand. The northern area is a long, narrow peninsula called Satingpura. The southern area is a rectangular area consisting of coastal plains in the east and highlands and mountains in the west, from which originates an important watershed area. Similar to other provinces in Thailand, Songkhla has three levels of government administration: national (i.e., the local offices of the various ministries), regional, and local administrations. Whereas the local offices of the ministries and the regional administration in the province are merely territorial extensions of the central government and have neither absolute autonomy nor authority over policy making and administration, by contrast, local governments are self-governing bodies (Krueathep, 2008).

Data collection

The data were collected from in-depth interviews and participatory observation. Fifteen informants selected by purposive sampling from the various group leaders of the Songkhla food safety collaborative network were interviewed to obtain data on the development of the model. The purpose of sampling was to obtain diverse experiences among the participants, which are essential for obtaining a variety of examples relating to the phenomenon being studied. Such diversity includes more dimensions and properties of the concepts and the categories that are discovered, thus leading to a better understanding of the phenomenon (Mutsheva, 2010; Strauss & Corbin, 1998). The data were tape-recorded and transcribed verbatim for analysis.

In this study, the informants were selected from the various group leaders of the Songkhla food safety collaborative network, including producers, marketers, consumers, and supporters. Table 1 provides a summary of the informants in this study.

Table 1 Summary of informants

Groups	Types	Number
Producers	Private/citizen	2
	Non-profit organization	1
	Government	1
Marketers	Private/citizen	1
	Government	5
Consumers	Government	2
Coordinators	Academia	1
	Non-profit organization	1
Media	Private/citizen	1
Total		15

Data analysis and validation

The data collection and analysis were concurrent. The data were analyzed using the content analysis method. An intensive analysis and careful integration into the examination, interpretation, and comparison of data from both interviews and observations were used to conceptualize the data and identify patterns or events. The comparative analysis led to the identification of the categories and the refinement of the components of the categories and the sub-categories.

The results were validated by several technologies. First, the researchers undertook a prolonged engagement (over 3 years) with the participants to gain an in-depth understanding of the cultures, language, or views of the participants through both in-depth interviews and participatory observation, and to build trust and rapport with the informants. Second, triangulation (the use of multiple references to draw conclusions about what constitutes the truth) was obtained by data, investigator, theory, and method triangulations. Last, member check, which refers to the provision of feedback to the study participants regarding the data and the researchers' findings and interpretations, was used, during which the participants confirmed that the core category and sub-categories of data were consistent with their experiences.

FINDINGS

The collaborative network for agri-food safety management

The network of food safety in Songkhla province identified that food safety has implications for the total food chain, including product quality, pesticide residues in vegetables, and the poverty and ill health of the farmers. In the marketing part, the food safety certificate system is hard to retrace to the small producers in the community (in the case of pesticide residues in vegetables), and the price cannot motivate producers to change the production to non-chemical means. Alternative markets for non-chemical products are rare, and consumption behavior often focuses on the comfortable and ignores environmental or social problems.

The collaborative network for food safety in Songkhla province was set up by using social capital in the area, which consists of two kinds: structural and cognitive. Structural social capital refers to support from central government agencies and local government for the network so that it can, in turn, support the central government's policy for food safety. Civil society and community are both active, strong, and well developed, and there is group/network activity in working for sustainable agriculture and food safety in Songkhla. The cognitive social capital consists of strong development at the group level and concrete knowledge of agri-food safety management, which is accomplished through mutual operation.

They identify the goals of the network, as well as common problems. The network's coordinating mechanism has the role of encouraging and directing the deliberative process, and each group develops through mutually determining goals and working toward them. The leaders of each group have constructed a network map so that they can connect as a network group. Each situation is reviewed in terms of both problems and the social capital existing in the area, including the policy and work model of each group/organization within the network, and the process is set up to meet mutual goals—i.e., those that harmonize with the goals of each group. Each work issue is regarded as a mutual issue in the network. This mutuality encompasses the entire process of management from origin to destination, thus harmonizing each group/organization within network. A main host assumes responsibility for acceptance from each one in terms of mutual decision making and implementation. The mutual decision making process requires adoption and commitment from each member, who each participate in determining the mutual goal of pushing good public policy for agriculture and food safety in order to develop the production system for food safety in the area. This approach makes the community self sufficient in the long term, keeps and restores natural resources, leads to food security, promotes a healthy society, and determines alternative policy for implementation.

The agri-food safety collaborative network identified the goals of food safety as self-reliance, resource conservation, food security, and health. The primary issue of the network is to develop a managerial system for agriculture and food safety in the area, which consists of three aspects (Figure 1) : developing a fair and self-sufficient production system, a fair and sustainable marketing system, and an appreciative consumption, which are described in detail as follows:

- Fair and self-sufficient production emphasizes the development of production factors and a data system for production planning, encouragement of farmers to become self-sufficient in the long term, assisting each other in the area, and creating a learning process for farmers based on mutual principles of a fair production system.
- Fair and sustainable marketing pertains to a fair system for producers and consumers consisting of a price system for adjusting production behavior, a channel for supporting the development of the production system, improving safety, and the development of a suitable model for development and consumption in each area. Moreover, this fair marketing system must be a public forum capable of creating a learning process for producers, retailers, and consumers, leading to the development of mutually beneficial relationships and reciprocity.
- Appreciative consumption pertains to equal levels of food safety among consumers, adjustment of consumption behavior, knowledge of the value of safety food for themselves, the society, and the environment, and creating a trend toward using food safety as a marketing mechanism for sustainability.

The implementation has done by sharing work and resources from groups and organizations within the network, harmonizing the role of each group/organization in following the overall mission. The civil society networks take responsibility for expanding the network of producers and for coordination of the network. The local government lends support for marketing channels and budgeting to coordinate the network. The central government agencies take the responsibility to develop the knowledge of free-chemical production; budget support to organize the learning process of agriculture; support linking between the networks of entrepreneurs, hospitals, and schools; and monitor food quality.

A flexible working attitude is necessary in the collaboration of networks. The members have to focus on the principle of virtue in working together, arranging for a regular learning process, being a horizontal network, willingly sharing work, assisting each other in the network, supporting one another's strong points and reducing weaknesses, and learning and adjusting according to each situation. Network members adjust their attitudes and accept each other's differences. When the network has a good relationship, the work will go from being routine to being voluntary, and the working processes will be adjusted to support a working culture among the different groups.

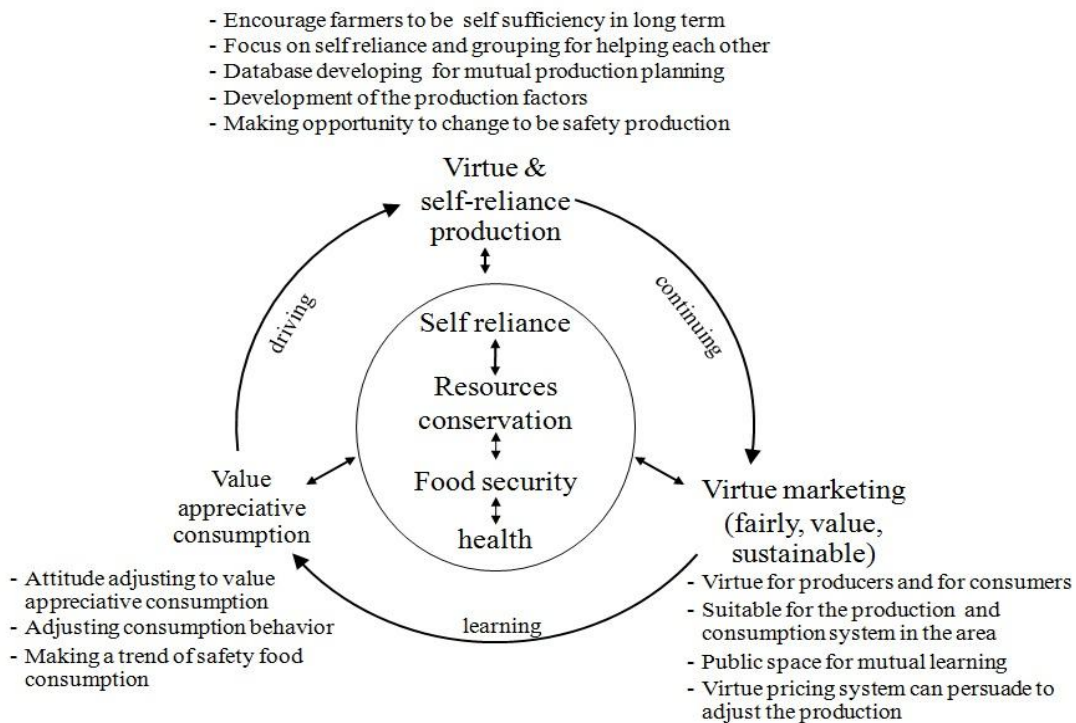


Figure 1: Agri-food safety management approach of the collaborative network in Songkhla province

Supporting mechanism for participation of the collaborative network

Network management

The arrangement of the network structure is identified as the first step in the network activities. The groups and organizations in the network emerge from the different experiences of both the public and private sectors (i.e., producers, retailers, consumers, and supporters) that work together in a horizontal network characterized not by hierarchy but by voluntarism as a result of the open communication with the public. The creation of a learning process leads to a new network that continues to grow. The structure of the network focuses on the inclusion of individuals in groups, both area-based and target-oriented, as well as on the formation of relationships among group to form through various, regular activities.

The second step in the network activities is the development of stronger relationships in the network and the cooperation with external networks, which are either other issue-oriented and area-based networks, or external organizations. The network relationships are developed through regular activities, which emphasize the group learning process and the understanding and development of a flat organizational structure. The regular activities are intended to develop strong relationships, build mutual trust and responsibility, and encourage members to work together as friends and help and strengthen each other.

The regular activities also play an important role for creating mutual learning processes, developing new leaders, and expanding the network by inviting new participants to join. Such activities lead to the continuous increase of the network members, enabling it to develop a common understanding among groups and to adjust the concepts of each group in harmony with the agri-food collaborative network. Because of new groups joining continuously, the network becomes independent of one leader. Rather, new leaders emerge regularly such that an ineffective mechanism is replaced by another. Such process has led to the sustainability of the network.

Coordination

Coordination is an important supporting mechanism of the network because of its flat structure. The central coordinating mechanism is the ability to work across groups or organizations. The overall coordination development relies on the cooperation among the various groups and organizations. Full-time and part-time staff capable of connecting both internal and external networks and facilitating an efficient and transparent management is necessary for effective cooperation. Furthermore, the network requires groups to be recognized and requires sufficient funding for operation and for strengthening new groups. The network coordination consists of a multi-level (i.e., central level and area level) mechanism. The central-level coordinating mechanism is composed of a working group comprising of members of the society and the academic and government sectors. The roles of each sector in the network adjust according to the situations. The members from the academic sector mainly contribute knowledge and support for the learning process, while the local government and external organizations provide the funding for the network operation and coordination. Meanwhile, the coordinating mechanism in the area level is arranged into four zones based on similar ecosystems. Each area has its own strength and emphasizes different tasks. The area level coordinating mechanism has clear responsibilities, works continuously to connect both internal and external networks, encourages cooperation, manages the information system, and strengthens the network. The role of the area level coordinating mechanism are to connect groups in each area, thereby creating a multi-sector area network, and to link targets, knowledge, and working plans between the central and the local areas through connection and coordinating activities and mutual learning among the four zones.

Mutual learning

As the network expands continuously, the objectives and the working process between the new and old members have to adjust accordingly through collective activities for harmonizing the learning process. The members develop the learning process for the network by emphasizing multi-level learning, publicizing information for the public, facilitating intra- and inter-network mutual learning, using technology and media to distribute knowledge widely to the multi-level network, and developing a collective learning process. The knowledge development consists of an information system of network production and consumption, and production factors for sustainability

such as production technology and conservation for local genetics. They also developed a quality certification system for the network's production processes, leading to safety standards and a fair marketing system. The mutual learning empowers consumers, adjusts their attitudes toward holistic living, sufficient living, reducing unnecessary cost, self-reliance, and encourages them to help each other in the community. Such learning enables consumers to realize the value of food safety, health, fairness, and self-value.

Social communication

Communication is an important tool in facilitating the network's learning and in expanding its learning to the public. The agri-food collaborative network is connected with other networks in the province, enabling it to work with the others in sharing resources through mass media such as radio. The network works together under its agreement with non-profit media organizations, to ensure the communication of knowledge and activities has continuity. However, they must focus on making the learning process effectively utilize the media to promote an understanding of the network's goals and other related information. The effective communication of such information aims to encourage people to improve their consumption behavior by paying more attention to food safety, achieving food safety through the network, which in turn increases the demand for safe food and finally prompting producers to change their production behaviors accordingly.

CONCLUSIONS

The purpose of this study was to explore the participation in a collaborative network for food safety at the local level. The goals of the agri-food safety management policy of the collaborative network in the province of Songkhla, Thailand, are self-reliance, resource conservation, food security, and health. The primary issue of network is developing a managerial system for safety food in the area, which consists of three aspects: developing a fair and self-sufficient production system, a fair and sustainable marketing system, and an appreciative consumption. The network's goal of food safety not only includes the production of food free from contaminants or disease according to the term's basic definition, but also the management of food safety including health, environment, and the sustainable utilization of resources for food security. The network focuses on maintaining traditional production processes that are friendly to the environment, conserving local resources for sustainable agriculture, and the further development of knowledge necessary for addressing current food safety issues. The goal of food safety in terms of health not only includes the consumers' health, but also that of producers by reducing their risk of exposure to agro-chemicals in the production process. The fair marketing system is developed to enable producers to maintain safe and sustainable production, and to enable consumers to access food at fair prices. Encouraging consumers to appreciate a fair system in production and marketing helps ensure the accessibility of food products and the demand for food safety. In turn, this encourages producers to change their production behaviors toward safety and environmental friendliness for sustainable production.

The supporting mechanism of the Songkhla food safety collaborative network consists of four aspects: (1) network management; (2) coordination, which is an important supporting mechanism for the network's flat organizational structure; (3) mutual learning, which is facilitated by collective activities for the network's learning process intended to harmonize new and old members of the network; and (4) social communication, which creates the network's learning and expands its learning to the public. In social communication, the network uses the media to motivate consumers to understand the importance of food safety, and the goals of the network. They work together with the media and other networks under an agreement of collaboration, which facilitates resource sharing and maximizes benefits.

The network focuses on social learning among groups in the network, most of them having different experiences and working cultures, so that they can build trust in each other. Learning is a key factor that enables a network to be strengthened and that empowers the people who become involved in the work. When a network is constantly working to achieve sustainability, it has to be a continuous process of learning concurrently. The mutual learning that results influences trust and produces collaborative relationships. These results also support previous findings that collaboration between community groups, and between these groups and various levels of government, provides opportunities to maximize resources, share information, and initiate learning and supportive relationships that help citizens to survive in a rapidly changing world. A cooperative culture based on constructive open dialogue

and the development of trusting and collaborative relationships are necessary for rebuilding social capital (Cuthill & Fien, 2005). To re-establish cooperation as a cultural norm within a community requires considerable time and commitment, both across community groups, and between community and local government (Hoatson & Egan, 2001).

This study has several limitations. First, the sample is small because of the study's focus on the backbone unit of the collaborative network, which was selected from groups of public and private agencies and which took into account the various groups represented in the food supply chain: producers, entrepreneurs, and consumers. Second, the functionality of the network focuses mainly on agriculture and food crops because of the criteria for issue setting, which is based on the host of operations in each problem area. If networks are expanded and strengthened, they should take steps to extend the coverage to other foods. Third, the collaboration in the food safety network in Songkhla province has developed from social capital existing in the area, especially human resources. The network of civil society in Songkhla Province has developed for over 30 years, with most members working at the community level, and it has received constant funding from external agencies. Moreover, the knowledge of sustainable agriculture in this area has been developing for years, mostly at the community level. These constitute the social capital in the area from which the collaborative network for food safety was developed. Therefore, if the study is to be generalized to other groups looking to develop collaborative networks, the social capital in the area will have to be carefully considered and strengthened before further work can be done in building the connections for a network.

AUTHOR INFORMATION

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