

COMMUNICATION OF THE ENVIRONMENTAL ORGANIZATIONS: COMPARISON OF AIR POLLUTION CONTROL BETWEEN CHINA AND THAILAND

การสื่อสารขององค์กรด้านสิ่งแวดล้อม:
การเปรียบเทียบการควบคุมมลพิษทางอากาศระหว่างจีนกับไทย

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Abstract

Air pollution has been one of the serious environmental problems in many countries, which needs effective communication of environmental organizations. The study aimed to explore the construction and compare the establishment of Chinese and Thai public and central environmental organizations, including communication effects to the authorities in the dissemination of air pollution control. The integrated research methods of case study, news content analysis, and field research were employed. It was found that the authority of the environmental organizations was constructed by communication in the process of air pollution control. The main elements consisted of air pollution event, cause, strategy, behavior, institution, moral and legal issues. Comparing the two websites of the Ministry of Ecology and Environment in China (MEE) and Pollution Control Department (PCD) in Thailand, there were four aspects in common, legitimacy, rationality, reasonableness, and timeliness which had an important connection to organizational authorities. Mechanism of air pollution management both in China and Thailand were carried out based on top-down with a tiered management approach. However, anti-pollution measures between the two countries were different because of different point sources of air pollution. The air pollution is mainly from industry in China, while it is from agriculture in Thailand. In addition, Chinese government agencies have dispatched investigation teams to carry out random spot checks, formulated reward and punishment systems, and promoted the work in an orderly manner, while Thailand has employed a single command approach with participation from local citizens to cope with air pollution.

Keywords: Environmental Organizations, Air Pollution, Organizational Communication, China, Thailand, Situational Crisis Communication Theory

บทคัดย่อ

มลพิษทางอากาศเป็นปัญหาสิ่งแวดล้อมสำคัญในหลายประเทศ ซึ่งต้องการการสื่อสารที่มีประสิทธิภาพขององค์กรด้านสิ่งแวดล้อม การศึกษานี้มีวัตถุประสงค์เพื่อสำรวจองค์ประกอบโครงสร้างและเปรียบเทียบการจัดตั้งองค์กรด้านสิ่งแวดล้อมของภาครัฐในส่วนกลางของจีนและไทย รวมถึงผลกระทบด้านการสื่อสารกับบทบาทหน้าที่ในการเผยแพร่เรื่องการควบคุมมลพิษทางอากาศ โดยใช้วิธีการวิจัยแบบบูรณาการ ประกอบด้วย กรณีศึกษา การวิเคราะห์เนื้อหาข่าว และการวิจัยภาคสนาม ผลการศึกษาที่สำคัญพบว่า อำนาจหน้าที่ขององค์กรด้านสิ่งแวดล้อมได้รับการสร้างขึ้นโดยการสื่อสารในกระบวนการควบคุมมลพิษทางอากาศ องค์ประกอบหลักในการสื่อสารสิ่งแวดล้อมขององค์กรดังกล่าว ประกอบด้วย การสรุปเหตุการณ์มลพิษทางอากาศ สาเหตุ ยุทธศาสตร์ พฤติกรรมสถาบัน กฎหมาย และคุณธรรม จากการเปรียบเทียบเว็บไซต์ของกระทรวงสิ่งแวดล้อมและระบบนิเวศ (MEE) ในประเทศจีน และกรมควบคุมมลพิษ (PCD) ในประเทศไทย พบประเด็นที่สอดคล้องกัน ได้แก่ ความถูกต้องตามกฎหมาย ความสมเหตุสมผล ความเหมาะสม และทันสมัยการดำเนินงานที่มีส่วนเกี่ยวข้องกับบทบาทหน้าที่ขององค์กร ทั้งจีนและไทยใช้กลไกการจัดการมลพิษทางอากาศแบบบนลงล่างตามลำดับชั้น จากรัฐบาลส่วนกลางลงไปจนถึงระดับท้องถิ่น อย่างไรก็ตาม มาตรการป้องกันมลพิษระหว่างสองประเทศแตกต่างกัน เนื่องจากมีแหล่งกำเนิดมลพิษทางอากาศที่ต่างกัน มลพิษทางอากาศในประเทศจีนส่วนมากเกิดจากอุตสาหกรรม ในขณะที่ในประเทศไทยส่วนมากเกิดจากเกษตรกรรม หน่วยงานของรัฐในจีนได้ส่งทีมสืบสวนไปสุ่มตรวจสอบแหล่งกำเนิดมลพิษทางอากาศ กำหนดระบบการให้รางวัลและการลงโทษ รวมถึงส่งเสริมการทำงานอย่างเป็นระเบียบ ขณะที่ในไทยใช้ระบบการสั่งการแบบเบ็ดเสร็จ และอาศัยกลไกการมีส่วนร่วมจากภาคประชาชนในการช่วยจัดการมลพิษทางอากาศ

คำสำคัญ: องค์กรด้านสิ่งแวดล้อม มลพิษทางอากาศ การสื่อสารองค์กร จีน ไทย ทฤษฎีการสื่อสารในภาวะวิกฤต

Introduction

With the emergence of environmental problems in recent years, the academic significance of environmental communication research has been paid more and more attention. Littlejohn & Foss (2009) co-authored the encyclopedia of communication theory, which included the term Environmental Communication. As a crisis subject, environment spread to provide the public with availability for decision-making tasks of environmental knowledge (Dai, Zeng & Huang, 2015). The realization of the task involved various organizational communication issues.

Since air pollution is an environmental problem of cross-border, lots of research results about different countries have been explored. Many studies analyzed the role of communication in air pollution control. It is found that media had rightly identified the need for policy measures to counter the poor air quality observed in India (Murukutla et al., 2017). Some parallel studies of mass media information and people's attitudes and behaviors indicated that the high media coverage was not followed by a very high motivation towards pro-environmental behaviors in Italy (Carducci et al., 2017).

It can be seen that most of research focus on the view of mass communication, while air pollution studies from the perspective of organizational communication are rare. Therefore, this study attempts to analyze air pollution control from an organizational communication perspective. It mainly focuses on the comparison of air pollution reports, grabbing from websites of two environmental organizations: Ministry of Ecology and Environment (MEE) in China, and Pollution Control Department (PCD) in Thailand.

Research Objectives

Comparing the common and differences between the two environmental organization websites, three main points will be explored:

1. construction of the authority of environmental organizations in the dissemination of air pollution control.
2. comparison of the establishment of air pollution communication authority of China-Thailand environmental organization.
3. communication effects to the authority of environmental organizations during air pollution control.

Literature Review

Organizational communication includes an organization and communication literally. An organization is the site of controlled and coordinated activity. Communication can play an important role on a vast scale in society, including in the process of air pollution control. It should be obvious that an organization cannot exist without communication (Keyton, 2005). In general, an organization is defined by the linguistic properties that reside in its internal and external communication inter-dependencies. In this study, the organizational

communication equates the external communication of an organization.

Although the relationship between organizational communication and environmental risk are very complex, it is found that organizational communication mechanism is amplified by environmental risk. Virtual information has tended to be more authentic and greatly improves the effectiveness of information communication through communication of organizational website. Organizational communication is a complex and continuous process in air pollution control (Qiu & Xiong, 2015). To some extent, organizational communication not only effectively responds to the public's demands for higher quality of atmosphere in the view of environmental justice, but also reduces the public's high-risk perception of air pollution. Meanwhile, the environmental organization constructs its own authority in the process of communication.

Organizational communication is very important to an organizational authority because it directly affects the effect of organizational communication. Max Weber systematically organized authority into three types, named Traditional Authority, Charismatic Authority, and Legal-Rational Authority. Traditional Authority is based on tradition and convention and it is very sacred. Charismatic Authority, is characterized by a person's outstanding talent and a model of belief that makes people follow and willing to obey. Legal-Rational Authority relies on laws and regulations and legal norms (Maigret, 2009). Comparing with the previous two types, Legal-Rational Authority is more dependent on the institution and system. In the internet era, the pursuit of democracy has already

become the whole world's trend. Legal-Rational Authority is easier to be accepted by public. The organization will follow the trend of times, choosing legal-rational style and using communication to construct its own authority. In general, there are two distinct characteristics in organizational communication. As Eisenberg, Goodall & Trethewey (2016) wrote in the book *Organizational Communication: Balancing Creativity and Constraint*: "One is getting what organizations want, the other is following established rules". That means the target and regulation of an organization is very specific and clear. This is largely determined by the function of an organization.

To an environmental organization, they are responsible for environmental pollution control, such as water pollution, soil pollution and air pollution. In the process of environmental pollution control, the authority of an environmental organization is built through-communication, which is a dynamic organizational communication model (Xie, 2011).

According to the Situational Crisis Communication Theory (SCCT), many elements affect organizational authority, such as crisis events, crisis causes, crisis response strategies and behaviors, crisis institution, scientific control of crisis, etc. Relationships among various elements in the process of organizational communication are presented in Figure 1.

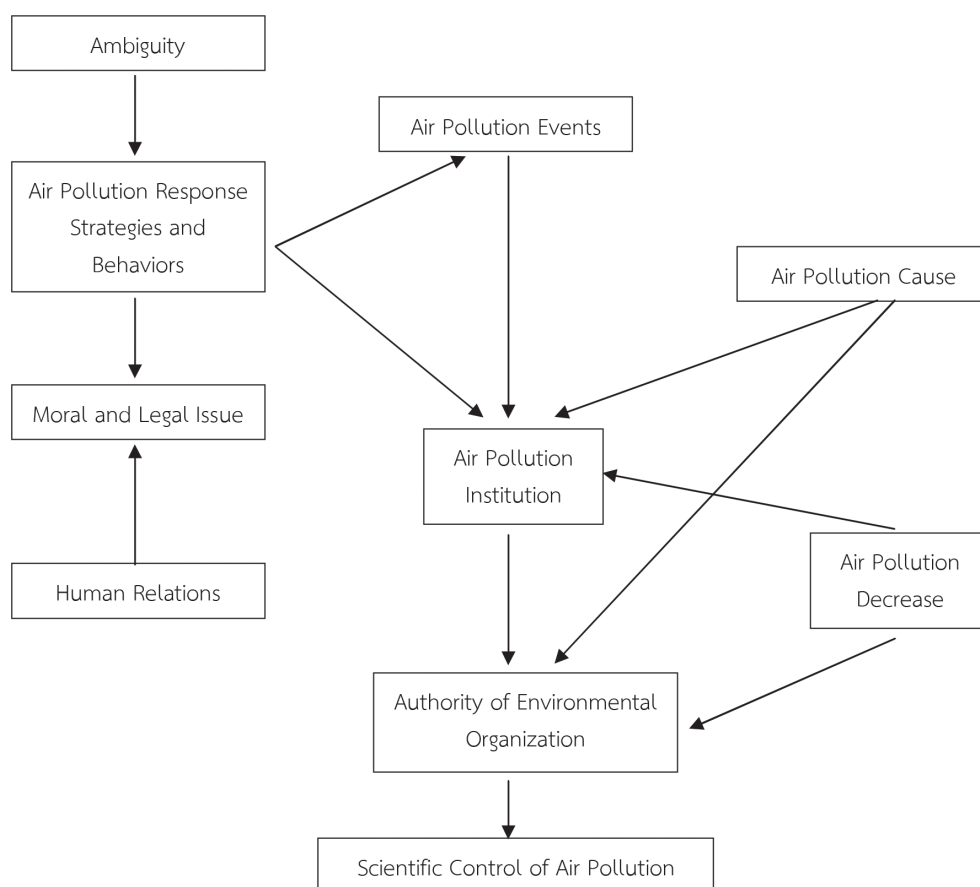


Figure 1 Relationships among various elements in the process of communication of environmental organization based on SCCT

Figure 1 is based on SCCT and reflects the authoritative construction of environmental organizations in the process of air pollution control. It can be seen that the Air Pollution Institution is in the central part, which plays an important role in the process of air pollution control. Firstly, the environmental organization check Air Pollution Cause to be made public and meet citizens' information needs. Secondly, according to Air Pollution Events, the institution takes Strategies and Behaviors to reducing the negative impact of incidents. Thirdly, Human Relations should be paid more attention to because it has important influence on organizational authority, such as interests, rationality, emotion, morality and so on. It was found that interpersonal communication plays a direct role in the relationship between superiors and subordinates in an organization. The interpersonal relationship built and maintained in an organization will regulate the interpersonal contract and the developmental contract (Wang & Chen, 2018). Although the authority does not deny the compulsion, it pays more attention to the compliance side's approval to reduce the resistance in the process of authority implementation as far as possible (Yu, 2006). That is to say, the bases of formal authority-legitimacy and position-need to be distinguished from sources of functional authority-technical competence and human relations skills, which support and often compete with formal authority (Peabody, 1962). In order to achieve the goal, an organization usually use some vague methods to deal with crisis. For example, Ambiguity is

as strategy, including promotes unified diversity, facilitates organizational change, amplifies exiting source attributions and preserves privileged positions (Eisenberg, 2009).

Methodology

Data collection

This study employed integrated research methods of case study, news content analysis, and field research.

1. Case study research

This study selected the case study of China and Thailand because both countries pay great attention to air protection and have taken strong measures to jointly deal with air pollution and achieved some results. By comparing the two countries' different measures, we can learn from each other and achieve the goal of jointly protecting the natural environment. Data sources of both cases were from documentation, interview and direct observations. Data classification based on objectives of this study. Moreover, triangulation method covering data, investigator and methodological triangulation were conducted.

The problem of air pollution has become increasingly serious in recent years. In early 2018, China's Jing-Jin-Ji region, which is a corruption of Bei Jing, Tian Jin and He Bei, Bangkok of Thailand were also hit by severe haze weather. Bad air quality has a great impact on public health and daily life.

The citizens want to know more about the main causes of air pollution. In

other words, their emotional appeal to the desire to enjoy clean air goes up and up. Environmental organization shoulders important responsibilities. In this crisis environmental situation, they will take active managements or take decisive actions to control air pollution. This process of control air pollution involves dealing with a variety of situations, which is very complex and variable. Meanwhile, there is a lot of uncertainty. They realize that regulations are needed and set up along with moral law and scientific methods.

2. News content analysis

Two websites of MEE in China and PCD in Thailand were selected, analyzing the reports of air pollution from October 1, 2017 to May 31, 2019. The main reason is that in the winter of 2017, at the end of the Atmospheric 10 Rulers issued by the State Council of China, inspectors were sent to check the situation of air pollution control and to focus on solving existing problems various across the country. Meanwhile, Thai Government established Twelfth National Economic and Social Development Plan (2017-2021): “Environmental problems have risen along with economic growth and urbanization”. Moreover, there was the most serious air pollution in the northern Thailand during February to April 2018 (Pollution Control Department, 2019). By comparing the reports of two environmental organizations between China and Thailand in the process of air pollution control, the research explained differences and similarities in the construction of organizational authority. In order to collect

data comprehensively, both websites used its search function to input keywords PM2.5 In terms of sample selection, the number of valid samples was 215 reports from MEE website and 148 reports from PCD website.

3. Field research

Field research in the Northern of Thailand, Chiang Mai, was conducted because of experiencing serious air pollution for more than ten years until was ranked as the worst air pollution in the world, in which agricultural burning has long been a major cause of air pollution (Wipatayotin, 2019).

The research team conducted in-depth interviews with both Thai and Chinese key informants based on the ethical consideration. For Thai side, ten key informants were interviewed consisting of the representative leaders of PCD, two representative leaders in both central and rural areas in Chiang Mai including the head of Mae Chaem district, the village leader in Mae Chaem, five representatives of Public Relations Department Region 3 Chiang Mai, the head of NGO whose main task is about rural livelihoods development and the head of local media were interviewed. For Chinese side, two international journalists based in Thailand, from People’s Daily and China Radio International were interviewed because they were national media reporters and the director of the bureau in Thailand, who were familiar with environmental reporting. During the interview, the main questions included three aspects: 1) the measures taken by the Chinese and Thai governments to deal with

air pollution; 2) the sources from which the media report relevant issues; and 3) opinions on some measures dealing with air pollution that involve with traditional practices, such as banning firecrackers set off during Chinese New Year.

Data analysis and synthesis

The issue of air pollution news was classified in detail (Table 1) in order to be clearly analyzed and synthesized, and then content analysis was conducted.

Table 1 Themes of air pollution issues

Themes	Air pollution issues
1. Air Pollution Events	Air pollution events or crisis, including air pollution in and around the Jing-Jin-Ji region and air pollution by fireworks and firecrackers during the Spring Festival in China, and air pollution in the northern and central regions of Thailand.
2. Air Pollution Cause	What causes air pollution? (such as industry, a large population's daily life and open-burning of agricultural sector)
3. Air Pollution Institution	Regulations are declared by the government or environmental organization.
4. Air Pollution Response Strategies and Behaviors	What does government or environmental organization do?
5. Moral and Legal Issue	The moral and legal problems occur during the process of air pollution prevention and control
6. Scientific Control of Air Pollution	Combine scientific technology with local knowledge, including ecological environment remote sensing application technology and satellite remote sensing technology is used to monitor the atmospheric environment.
7. Air Pollution Decrease	Feats of air pollution control is good.

Results and Discussion

According to the proposition that media discourse is not only used as communication but also a symbolic power (Bourdieu, 1991). The media of different countries are influenced by different values and power structures (Man & Sereenonchai, 2019), and then show

differences in themes and frameworks, so as to reflect the interweaving and game of power (Zeng, Jia & Zheng, 2013).

1. Analyzing reports of MEE website in China and PCD website in Thailand

Firstly, the reports from MEE website were statistically analyzed (Figure 2).

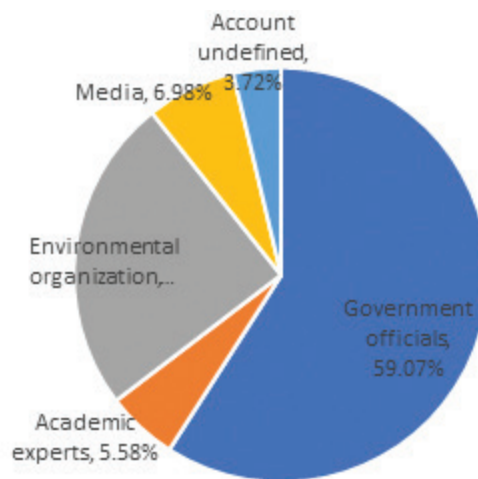


Figure 2 Source of information on MEE website

Among 215 reports on MEE website in China, the highest source of information was from government officials (127 reports, 59.07%), following by environmental organizations (53 reports, 24.65%) and media (15 reports, 6.98%). It can be seen that in the process of air pollution prevention and control, the highest sources of information came from governments and environmental organizations, providing that air pollution is no longer a public issue but an official one. Governments and environmental organizations had become important sources of information, or rather, leaders on the issue of air pollution. In this sense, it played an important

role in the construction of organizational authority. They also shouldered important responsibilities and need to respond adequately to public demands for environmental justice, so opportunities and challenges coexisted. However, PCD website in Thailand only mentioned the Public Relations Office or coordinators under PCD or Ministry of Natural Resource and Environment as the source of information.

Secondly, according to the classification table, the air pollution reporting topics of the two websites are classified (Figure 3).

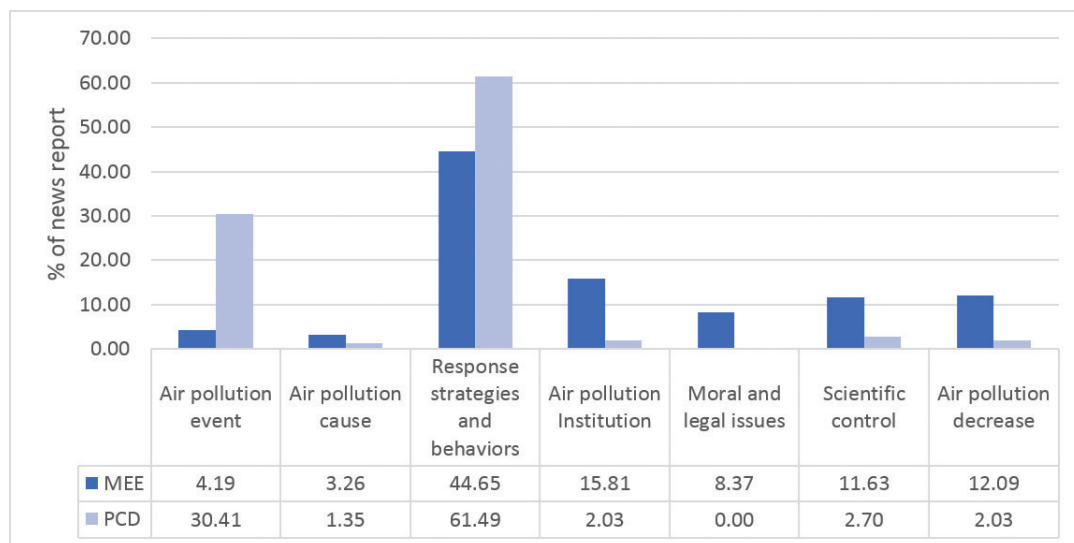


Figure 3 Theme of Air Pollution Issue on MEE and PCD websites

The most outstanding theme reported by MEE and PCD was air pollution response strategies and behaviors, accounting for 96 reports (44.65%) and 91 reports (61.49%) orderly. This might be because website is the timely, up-to-date and effective channel for both organizations to broadcast their response strategies and behaviors to their citizens, which is in accordance with Ramírez et al. (2019). The second and third rankings reported by MEE were air pollution institutions (34 reports, 15.81%) and air pollution decrease (26 reports, 12.09%), while air pollution event was the second ranking reported by PCD (46 reports, 31.08%) and mostly provided detail together with response strategies and prediction of the air pollution for tomorrow.

2. Comparative analysis of air pollution control measures between China and Thailand

2.1 Common of air pollution control measures between China and Thailand

Through comparison, it was found that the websites of two environmental organizations in China and Thailand shared something in common in the process of authority construction. In summary, they included the legitimacy, rationality, reasonableness and timeliness of organizational authority. Legitimacy implies a certain value of political order recognized (Habermas, 1989). Rationality means that the form used in the exercise of public authority should be rational. Reasonableness means that authority generally causes people's voluntary obedience in a moral and legal way, and pays more attention to meeting people's psychological

needs and emotional balance (General Editorial Board of China Encyclopedia, 1992). Timeliness is seen from the perspective of time and space. It attaches importance to reality and should be adapted to the national conditions.

In the process of air pollution control, the websites of two environmental organizations basically reflected the characteristics of these four aspects. MEE website reported that the regulations on the status were not consistent with the common practice in foreign countries, which made the results of pollution quality concentration monitoring at home and abroad less comparable. According to the specific domestic circumstances to actively formulate relevant laws and regulations, the environmental organization MEE revised regulations to achieve international integration and integrate air pollution control with international standards (Report on 31 July, 2018). For example, He Bei Province had the largest number of reports among the reported provinces and cities, with 26 reports (18.70%), followed by Si Chuan Province with 8 reports (5.76%), and Bei Jing with 6 reports (4.32%).

Multiple mentions of the Jing-Jin-Ji region in the report have almost become a symbolic way of expression. In recent years, the government has been promoting coordinated regional development to solve a series of problems brought by diseases of big cities, such as traffic congestion, soaring housing prices and severe air pollution.

The central government's establishment of Xiong An New Area in He Bei Province is an important development strategy as well as a driving engine for economic development in the Jing-Jin-Ji region. The first problem is to solve the problem of air pollution. Therefore, the research suggests that the focus on He Bei Province is mainly because of the need of national development strategy, and human factors are the most important. This reflects a special national situation. Many specific measures have been taken by environmental organizations to control air pollution in Jing-Jin-Ji region. The environmental organization launched a campaign of Blue Sky Defense, including lots of behaviors: implement ultra-low emission reform for industries such as steel and iron, zero clearance of small coal-fired boilers, prevent beverage smog pollution, revise vehicles exhaust standard, using clear resource instead of coal in villages, control fireworks and firecrackers during the Spring Festival, and so on. It is reported that the PM2.5 concentration in He Bei Province has decreased by about 25% in the past 2 months compared with the same period last year (reported on 4 December, 2018).

Reflection of PCD roles from its website, the organization had exposed their legitimacy through their readiness with collaboration among related partners (PCD news on 16 January 2019) and paying the most attention to launching the more serious rules to control air pollution in the most serious region of Thailand facing the pollution every year in the same period (PCD news on 27

February 2019). In the northern part covering nine provinces, PCD has followed the situation closely with disseminating no burning campaign during 15 February to 30 April of every year (PCD news on 27 February 2019), and launching the community rules to cover at the village level (PCD news on 11 March 2019).

Rationality of PCD could be reflected by the action to cope with air pollution by highlighting and monitoring not only the cars on streets in Bangkok, but also its own cars to have no black smoke (PCD news on 28 January 2019). PCD also made a cooperation with Japan to solve the air pollution problem (PCD news on 7 August 2018), including adopted technologies to help monitoring air pollution from the vehicles (PCD news on 8 November 2017) and decrease air pollution as the standard of crematorium (PCD news on 3 January 2019). After some periods of time of launching and monitoring the air pollution, PCD also organized the lessons-learned of their strategies and management (PCD news on 15 June 2018).

The methods of generating people's voluntary obedience in a normal and legal ways with paying more attention to people's psychological needs and emotional balance were: concerning about reducing the disputes of monitoring the vehicles with black smoke by filter papers and following the standard method (PCD news on 28 December 2017). Moreover, launching the news about air quality index with application based on the current situation and media exposure of most

people in Thailand (mobile with online media as application) (PCD news on 24 September 2018).

For PCD report, timeliness was highly concerned as reflected by the report of smog solution in 9 provinces of the northern Thailand everyday and frequently (7, 12 and 15 hrs.) during the peak period. Report on PM2.5 situation during January to February 2019 and updated data on average PM2.5 and PM10 via PCD news release and air4thai application and website (air4thai.pcd.go.th) during March to May 2019. During the beginning of the year was the most serious smog or air pollution in Thailand, particularly in the northern part. For other periods, reported about other issues

2.2 Air pollution management in China In-depth interview of Chinese journalists showed that the main cause of air pollution in China comes from several aspects, especially industry, and a large population's daily life.

On one side, it is the cause of industry. Construction dust is the main reason such as no dust control measures have been implemented in the material storage yard. Meanwhile, disorganized industrial dust emission is also needed to deal with. For example, industrial enterprises do not install air pollution prevention and do not normally operate air pollution prevention. In spite of these, there are still multiple pressures, such as heavy industrial structure, heavy energy structure and heavy coal structure.

On the other side, it is the cause

of a large population's daily life. Ten cities of China have a population of over ten million. In these super cities, exhaust from vehicles becomes one of serious social problems, which imperils people's health. Food and beverage smoke pollution such as hotpot peculiar smell affected the residents. In the countryside, it was agricultural burning in the harvest season because farmers often focused on burning straw and maize residues on a large scale. Villagers often used coal through the cold winter in the Northern China. Another problem of air pollution was fireworks and firecrackers during the Spring Festival. People celebrated the New Year by setting off firecrackers in both cities and villages, which produced lots of smog.

According to the website, faced with these problems, MEE took measures to reduce the air pollution in recent years as follows:

- 1) Limit cars, forbid motor vehicles, encourage public buses with electricity.
- 2) Citizens are encouraged to report illegal events or enterprises.
- 3) Launch a campaign with inspection such as Blue Sky Defense.
- 4) Organize Green Preach to communities.
- 5) Control food and beverage smog pollution.
- 6) Small coal-fired boilers are zero cleaned.
- 7) Fireworks and firecrackers are forbidden during the Spring Festival of 2018.
- 8) Implement ultra-low

emission reform for industries such as steel and iron.

9) Call on farmers not to burn straw or maize residues and let them return to the field.

10) Call on villagers not to burn coal for warming instead of gas, which rely on the government natural gas reconstruction project.

Meanwhile, a series of regulations are declared by government to reduce air pollution in recent years, which goal is to connect with the world.

1) Revise regulations to achieve international integration such as the revision of Environment Air Quality Standard (GB3095-2012).

2) People's Congress Committee set up a law enforcement inspection team to carry out law enforcement inspections on environmental protection.

3) Build green Great Wall on the North of China.

4) Formulate the standards for the emission of air pollution.

5) Implement the special emission limits in the 2+26 city of Jing-Jin-Ji and surrounding region.

6) The pollution and emission permits system are practiced.

After nearly three years of hard work, feats with air pollution control are achieved. There was a report that average concentration of PM2.5 in Bei Jing reached a record low of 34 micrograms per cubic meter. The PM2.5 concentration in He Bei Province has

decreased by 25% in the past two months compared with the same period of the previous year. Lan Zhou in Gan Su Province had fulfilled the provincial environmental protection target in 2017. Eshan county in Yun Nan Province had kept the rate of 100% excellent environmental air quality for four consecutive years.

2.3 Air pollution management in Thailand

Compared to China, the cause of air pollution in the northern Thailand mainly caused by open burning from agricultural sector and forest fire. Meanwhile, the main sources of air pollution in Bangkok and surrounded areas were from the incomplete combustion of vehicles on the road. The main measures for air pollution management are as follows.

Firstly, a 20 years period master plan (2017-2036) for the Air Quality Management has been set up, which adopting a framework of balancing economic, social and environmental concerns. Secondly, setting standard of air quality in the atmosphere and emission from source of origin. Thirdly, air quality troubleshooting in critical areas such as haze problem in 9 northern provinces has been managed by a collaboration among relevant organizations leading by the Ministry of Interior and The Department of Land Transport. The provincial governors are a commander with a single command method based on the Disaster Prevention and Mitigation Act, B.E. 2550. Furthermore, PM2.5 in Bangkok and

vicinity has been dealt with by setting guidelines for prevention and solving the problem so as to promptly respond to the critical situation.

According to the field research in Chiang Mai to interview local government and local people about the situation of air pollution. Mae Chaem Model Plus was the previous crucial integrated project initiated by the government and cooperated by various sectors inside Chiang Mai. The main goal of this project was to live together between hilltribe people and forest and reduce air pollution from agricultural open burning to achieve sustainable development. Under this project, the hilltribe farmers were also encouraged to change from maize planting to integrated farming system and bamboos planting for economic benefits and soil erosion protect such as a project of growing 100,000 bamboos had been launched mainly responsible by the NGO organizations in Chiang Mai where anyone could also donate for the young bamboos for the hilltribe people to grow for the mountain forest restoration. They relied mainly on social donations and learnt bamboo planting techniques from Southern provinces of China to instruct local farmers.

Another local regulation was the 60-day burning ban during February to April every year, which the period of banning varied for each province in the northern region. The most serious situation was in the year of 2015, about more than 5,000 local people were dyspneic, so the local government paid attention to the issue from then on. The Public Relations Office

Region 3 Chiang Mai had already more than 300 reports about this issue in the half year of 2018. TV played the vital role in this activity. Although the media faced many difficulties because burning maize residues was the local farmers' lifestyle and it was not easy to change. Both rewards and punishments would be used to improve the enthusiasm of farmers to stop burning. The good example of villagers at Mae Klang Luang planted paddy only one time each year. They do not burn the straw and let them return into the field, which become the good fertilizer for planting other crops as well.

Thus, it can be seen that with the remarkable achievements of air pollution control effect, the authority of environmental organization can be established. This comes not only from the exercise of the organization itself, but also from public empowerment, moral authority and professional authority (Bo, 2007).

Through the management, the air pollution in Chiang Mai has gradually getting better since 2016. According to the current standard of PCD, the quality of air is divided into five levels. The first level is the best presenting as blue color, while the fifth level is the worst presenting as red color. Meanwhile, PCD set up two monitoring points in Chiang Mai, and its website and Air4 Thai application report the air quality everyday.

This study compares the different measures taken by the governments of China and Thailand in the treatment of air pollution. Elements in the communication process based

on SCCT of Chinese and Thai environmental organizations can be summarized as shown in Table 2. It should be noted that the measures made by the governments of the two countries are based on the actual situation of their own countries. Meanwhile, these plate restrictions will be imposed.

measures are not fixed, but timely adjusted according to the treatment effect or the change of air quality. In China, for example, restrictions on driving are normal, with a limit of two license plate numbers per day. However, if the air quality gets worse, odd-even license

Table 2 Elements in the communication process based on SCCT of Chinese and Thai environmental organizations

Communication elements based on SCCT	Chinese environmental organization	Thai environmental organization
1. Air Pollution Events	air pollution in and around the Jing-Jin-Ji region (Bei Jing, Tian Jin and He Bei) and air pollution by fireworks and firecrackers during the Spring Festival in China	air pollution in the northern and central regions of Thailand
2. Air Pollution Cause	industry and a large population's daily life	open burning from agricultural sector and forest fire in the northern and from incomplete combustion of vehicles in central regions
3. Air Pollution Institution	Ministry of Ecology and Environment (MEE) declared the regulations.	Pollution Control Department (PCD) declared the regulations.
4. Air Pollution Response Strategies and Behaviors	<ul style="list-style-type: none"> - revise regulations to achieve international integration; - People's Congress Committee set up a law enforcement inspection team to carry out law enforcement inspections on environmental protection; - build green Great Wall on the North of China; - formulate the standards for the emission of air pollution; - implement the special emission limits in the 2+26 city of Jing-Jin-Ji and surrounding region; and - the pollution and emission permits system are practiced. 	<ul style="list-style-type: none"> - A 20 years period master plan (2017-2036) for the Air Quality Management; - setting standard of air quality in the atmosphere and emission from source of origin - a collaboration among relevant organizations to cope with air quality troubleshooting in critical areas such as Mae Chaem Model Plus; - the Disaster Prevention and Mitigation Act, B.E. 2550; and - 60-day burning ban during February to April every year, which the period of banning varied for each province in the northern region.

Table 2 Elements in the communication process based on SCCT of Chinese and Thai environmental organizations (Cont.)

Communication elements based on SCCT	Chinese environmental organization	Thai environmental organization
5. Moral and Legal Issue	<ul style="list-style-type: none"> - moral and legal problems occur during air pollution prevention and control - citizens were encouraged to report illegal events or enterprises 	<ul style="list-style-type: none"> - moral and legal problems occur during air pollution prevention and control - the hilltribe farmers were encouraged to change from maize planting to integrated farming system and bamboos planting to reduce open burning and benefit the soil
6. Scientific Control of Air Pollution	<ul style="list-style-type: none"> - cleaned small coal-fired boilers - ultra-low emission reform for industries - MEE application and website to update air quality index in various areas 	<ul style="list-style-type: none"> - development of equipment to monitor air pollution - PCD application and website to update new air quality index in various areas
7. Air Pollution Decrease	Report of PM2.5 concentration decrease in each area	

Conclusion

The study analyzed relationships between communication and organizational authority. It was found that communication has helped strengthen the organizational authority. In other words, the organizational authority seems not to exist without communication. Three main points of this study could be concluded as followed.

Firstly, the environmental organizations have used their own websites to deliver information about air pollution. In terms of relationships between communication and organizational authority, communication has helped strengthen the organizational authority. In other words, the organizational authority seems not to exist without communication. From the characteristics of this communication mode, it belongs to organizational communication, but not mass

communication. The main reason is that website of environmental organization has a clear purpose in the process of communication. For example, there was a report that Bei Jing's average smog concentration would decrease 25% at the end of 2017 on the website of MEE. This is not a news report but a notice of environmental organization of MEE. Meanwhile, Bei Jing's average smog concentration would decrease 25% is also the standard of MEE. With the clear goal, many measures explained above are very specific and effective.

Secondly, anti-pollution measures between the two countries are different. There are four main similarities between China and Thailand in their efforts to control air pollution, including legitimacy, rationality, reasonableness and timeliness. These four aspects are closely related to organizational

authority. However, anti-pollution measures between the two countries are different. The main reason is that air pollution originates from industry and a large population's daily life in China, while air pollution stems from agricultural burning especially in the northern Thailand.

Thirdly, not all organizations can have unimpeded channels of communication, and they need help of media. It is found that communication intensify organizational authority in the process of air pollution control, while there are some problems. They will have a long way to go to communicate how to reduce air pollution. It is a little comforting that most

organizations recognize the importance of communication to construct their organizational authority.

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