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## Environmental policy change in two transitional societies: a comparative study on anti-incinerator construction in Guangzhou and Taipei

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### ABSTRACT

Growing the volume of solid waste disposal has been generating numerous social conflicts in recent years, and challenging the transitional societies like Guangzhou and Taipei. This essay compares the dynamics between two cities in the greater China region in reaching a consensus on changing solid waste management policy following anti-incinerator protests in Taipei, Taiwan, and Guangzhou, mainland China by exploring several related questions: How does environmental activism alter changes in the environmental policies of two cases with different political systems? What are the conditions for emerging environmental activism and policy changes? How has the changing coalition opportunity structure changed environmental activism and affected the change in policy? Finally, to what extent do environmental activism and policy change reinforce the process of political transition among these political systems? Through the lens of an advocacy coalition framework (ACF), drawing on the formation of political coalitions and interactions among policy actors are the variables that affect policy change related to incinerator construction in Guangzhou and Taipei, to explore the larger issue about the political transformation of environmental management in these transitional societies, and revisit the application of ACF in transitional societies.

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## Introduction

The “war on garbage” seems to be a common challenge that is faced by urbanized cities. The growing volume of municipal solid waste and its management is one of the predominant issues for municipal governments. On one hand, municipal governments must seek an effective solution to reduce the waste in cities. On the other hand, the impacts on health and the ecosystem and the social response to the solution of managing solid waste should be not neglected. Incineration is likely an effective solution for the management of solid waste compared to landfills, which lead to land-scarified cities. However, the technology of incineration raises concerns among the general public over the impacts on health and the ecosystem. Most of the newly industrializing Asian cities, such as Guangzhou and Taipei, have faced a growing amount of waste generation in the last three decades,

which has led to discussions on the effective resolution of waste disposal. However, both Guangzhou and Taipei have experienced controversies regarding the building of incinerators, and they have been called to address rising political contentions (Chiou et al. 2011). The residents are against the building of incinerators because of the impacts on health and increased pollution, and they are also dissatisfied with the non-transparent and lack of public participation in the decision-making process. Indeed, serious conflicts over incinerator building have emerged between governments and local communities in these two transitional societies. This paper aims to examine the environmental activism and policy adjustments to the building of incinerators by comparing experiences in Guangzhou and Taipei through an exploration of inter-related questions: How does environmental activism lead to changes in the environmental policies of two different political systems? What are the conditions for emerging environmental activism and policy changes? How has the changing coalition opportunity structure changed environmental activism and led to changes in policy? Finally, to what extent do environmental activism and policy change reinforce the process of political transition in these political systems? Based on this study, it is argued that the ACF could be useful for comparative applications in political transitional societies, such as Guangzhou and Taipei.

The advocacy coalition framework (ACF) is used to facilitate the analysis of policy change in this study. The ACF assumes that policy participants form different coalitions to influence public policy; few previous studies, however, have discussed public policy adjustments in the course of political system development. The authoritarian state dominates the public-policy process, and the participation of non-state actors is limited in such policy making. As the transitional regime experiences political liberalization, it provides more public participation opportunities in the process of opening up the political system. Although the results of this study cannot be generalized across all countries, it provides a useful tool for understanding the process of policy change in Guangzhou and Taipei through the lens of an advocacy coalition framework, and its examples further explicate possibilities for the promotion of political transitions in the future.

### **Policy change and the advocacy coalition framework (ACF)**

An advocacy coalition framework (ACF) is particularly useful in facilitating an understanding of the dynamic relationship between state and non-state actors and policy change because it helps us to conceptualize the policy learning process and the factors that trigger policy change. Based mostly on the previous studies in advanced and industrialized countries, public policy is commonly changed to accommodate changing societies. Public-policy change can be seen either in terms of incremental changes within an existing structure or the innovation of new policies (Bennett and Howlett 1992; Hogwood and Peters 1983). Whether the top-down or the bottom-up approach to changing public policy is adopted, a variety of actors' interests and values are addressed (Hargreaves 1998, 291). The ACF draws on the formation of coalitions and the factors that affect policy change. Such coalitions are composed not only of state actors but also non-state actors, which include an "iron triangle" of government officials and lawmakers, interest groups, and researchers and journalists (Sabatier and Weible 2007, 192; Weible, Sabatier, and McQueen 2009, 122). Moreover, scientific and technical information play important roles in affecting policy change (Sabatier and Weible 2007, 197).

What is particularly interesting about the ACF is its focus on policy subsystems as the primary unit for analysis (Weible, Sabatier, and McQueen 2009, 122): in the broader context of the political environment, stable parameters and external events all affect the behavior of policy actors within policy subsystems (Sabatier and Weible 2007, 189; Weible, Sabatier, and McQueen 2009, 123). The ACF presents the basic constitutional structure; sociocultural values and social structure, for example, are stable parameters; external events refer to changes in socio-economic conditions – for example, changes in public opinion. Finally, the coalition opportunity structure mediates between stable parameters, and external events drive consensus on policy change (Sabatier and Weible 2007, 199; Weible, Sabatier, and McQueen 2009, 123). Scholars have deployed the coalition opportunity structure to explain how factors such as resources, institutional arrangements and historical precedents shape interactions among policy actors and variations among policy-change outcomes. Although the coalition opportunity structure can change over time in different policy contexts, it helps us to understand the various interactions between the structure and agencies in the policy-making process. Furthermore, political openness is relevant in examining the conditions of policy change. Political openness means “the possibility for organisations to participate formally in political procedures” (Lewis 2000, 108), which means that different actors can be involved in the policy process without any constraint; Sabatier and Weible (2007) state that the degree of consensus that is needed for major policy change is low in transitional societies because of their relatively low levels of political openness (Sabatier and Weible 2007, 201).

Sabatier and Weible (2007) argue that the open coalition opportunity structure (COS) tends to produce policy changes in democratic regimes, whereas the degree of consensus regarding policy changes is low in authoritarian regimes because the ruling elites dominate the decision-making process, which restricts public participation (Sabatier and Weible 2007, 200–201). The discussions engaged with the application of ACF in environmental policy have found in the previous literatures and addressed a tool for analysing stakeholders in environmental policy process and policy learning (Elliott and Schlaepfer 2001; Sotirov and Memmler 2012; Weible 2006; Weible, Pattison, and Sabatier 2010).

However, Scott (2012) argues that the rapid institutional evolution may allow for the application of the ACF to explain public policy change in the Asian context (Hsu 2005; Santa 2013; Scott 2012, 6; Villamor 2006). By comparing cases in Taipei in Taiwan and Guangzhou in mainland China, this study further shows that the Asian model of environmentalism, which advocates for the limiting of individual participation in environmental decision-making process (Gilley 2012, 288), has been changed both to include participants in the policy-making process and to accommodate the dynamics among those participants. Accordingly, special attention is paid to how the ACF is applied locally under the decentralized political structure of Guangzhou and democratizing Taipei by studying the different responses to anti-incinerator activism in Guangzhou and Taipei. While the emergence of civil society and public debates may have occurred over a public policy, policy advocacy does take place in the Asian context; also, the structural change of the political system allows political space for policy advocacy (Scott 2012, 2).

Provided that socio-political transformation has pluralized both Taipei and Guangzhou, effective environmental governance has been a challenge for the last three decades (Grano 2015, 7, 57). The increasing environmental awareness encourages civic engagement in environmental issues, and the states are no longer the only actor to dominate

the decision-making process. Mertha (2010) addresses the involvement of non-state actors in the policymaking process; for example, non-governmental organizations (NGOs) have both shaped policy outcomes and encouraged the movement towards a more pluralized society (Mertha 2010, 71–72).

## Methodology

The protests in Guangzhou and Taipei were chosen for this study out of dozens of incidents of anti-incinerator activism because in those cities, the incinerator projects were approved by municipal governments but their citizens without any information about the projects. Guangzhou is the capital city of Guangdong Province, which is at the forefront of Chinese economic reform; Taipei is the largest city of Taiwan. Both case studies not only reflect a rise in environmental awareness among the emerging middle class but also how protesters speak out against incinerator projects and affect changes to waste-management policy at the municipal level. Additionally, both cases show the dynamics between environmental activism and political transition, which have resulted in a more pluralized process of making environmental policy. Although both Taipei and Guangzhou have governed by different political systems, they still merit attention in this research as they share certain common political norms and values (Grano 2015, 7; Read 2012, 23). Both Taipei and Guangzhou share the similar experience on democratization, and the progression of Taipei city has clearly provided a model for Guangzhou regarding political transition, particularly with respect to environmental management (Grano 2015, 7).

This research used semi-structured, in-depth qualitative interviews that were conducted between January and July 2013 with key informants, including protesters, academics, and officers of environmental NGOs who engaged in anti-incinerator construction projects and promoted “zero-waste communities” in the Beitou District of Taipei City and the Panyu District of Guangzhou City, respectively. These interview data are supplemented with the archival examination of documents, such as Internet documents that were released by both local governments and newspapers in Taipei and Guangzhou to provide background information to facilitate a better understanding of the cases. The governmental documents facilitate our understanding of the decisions that were made by both the central and the local governments. In addition, information about environmental protection departments is helpful for investigating the relationship between those departments and environmental organizations as it serves as counter-evidence of the assumptions that are made in this study.

### *Two case studies: anti-incinerator protests in Taipei and Guangzhou*

Similar to other urbanized cities, both Guangzhou and Taipei face the challenges of solid waste management. Their economic growth and high consumption, along with the lack of a comprehensive 3R (reduce, reuse, and recycle) policy, generate a large amount of solid municipal waste. Lacking space for landfills, incineration appears to be the most effective method for managing a large amount of waste disposal. However, incinerators can have a negative impact on both human health and the ecological system; additionally, exclusion from participation in the incinerator construction decision-making process causes

dissatisfaction among citizens. Therefore, this section discusses the development of two protests, the dynamics between the policy actors and the mechanism of policy change. Simultaneously, the ACF is deployed to allow us to understand the process of policy learning and change among policy actors in transitional societies.

### *Anti-incinerator activism in Guangzhou*

Guangdong Province is a forerunner in economic reform, for example, with the establishment of non-state owned enterprises in early 1980s. Additionally, Guangzhou, which is the capital city of Guangdong Province, is one of China's wealthiest cities (with a gross domestic product that was ranked seventh in 2013); thus, Guangzhou is described as an "open city" with a relatively pluralistic society in terms of its economic, social and cultural perspectives (Chan 1999, 265). Guangzhou's openness reflects the rise of environmental awareness among the new, well-off middle class, and it has become a driving force in challenging the rule of government.

As with other cities in China, Guangzhou is also experiencing severe solid-waste problems, which have become controversial in the city. According to news reports, Guangzhou City generates 10.4 thousand tonnes of waste per day, with incineration and landfills that are used as waste-management solutions. Currently, Guangzhou City has two landfills and one incinerator; 90% of the waste is delivered to the landfills (People's Daily 2013), which are expected to be full in 3 years (Insufficient Land for Disposal Waste in Guangzhou). Thus, the municipal government planned to build a new incinerator. The controversial incinerator was proposed in Panyu District, which is a highly urbanized district in Southeastern Guangzhou. Several landmarks are located in this district, including Guangzhou University and Chimelong Xiangjiang Safari Park. In addition, this district is home to various famous and new residential complexes such as Riverside Garden, and Clifford Estates, and the closest residential area to the proposed site is only 1 km away. The Panyu District's government posted the incinerator plan in February 2009, and it was expected to be completed in 2010. At first, the proposal did not receive much attention from the local residents.

In September 2009, the Municipal Urban Management Bureau confirmed the incinerator project, and the land was requisitioned when the EIA was launched. Local residents inadvertently learned from a government website that a waste incinerator power plant was going to be built, and they posted the information on "Jiangwaijiang" (<http://www.rg-gd.net/forum.php?mod=forumdisplay&fid=12>), which is an online residential discussion forum to oppose the incinerator project. The news spread quickly, and several online discussion forums posted the same message against the plan. Later, the residents took to the streets of the district with a petition in October 2009, and they distributed handbills about the problems that were related to incinerators to seek public support.

Several days later, the protesters delivered a letter with one thousand signatures to the Guangzhou Municipal Bureau for Environment and Hygiene (now the Guangzhou Municipal Urban Management Committee). In the letter, the residents expressed their dissatisfaction with the plans to build the incinerator without public consultation, and they requested that the agency disclose the details of the Environmental Impacts Assessment (EIA) process and cancel the project. In the following days, the residents also visited the Panyu District government, the South China Institute of Environmental Sciences (the agency that was responsible for conducting the EIA for the incinerator) and the

Municipal Bureau of Gardens of the Panyu District (the agency that was responsible for choosing the incinerator's location). They also contacted members of the National People's Congress (NPC), the Chinese People's Political Consultative Conference (CPPCC), and the mass media for support.

In following month, dozens of protesters wearing surgical masks and dressed in t-shirts bearing the slogan "Refuse Toxic Air" with banners reading "Anti-Burning" and "Anti-Dioxin" collected signatures from the public at the entrance of a supermarket (Guangzhou 2009). Their actions attracted the attention of the police, who arrested some protestors for "alleged unlawful assembly". A few days after the protest, government representatives held a press conference, during which both the municipal and district governments announced that they had not changed their positions, emphasizing the need for the incinerator. This further angered the residents. The following morning, one thousand residents "strolled" to the headquarters of the municipal government and the Guangzhou Municipal Urban Management Committee with banners; upon their arrival, they shouted slogans and sang the national anthem. Although the police were present and the protesters posted their banners on police patrol cars, the police remained on standby and did not take further action. That afternoon, the municipal government suggested that the protesters select a representative from their number to enable better communication, but the suggestion was rejected.

In the face of this opposition, the government attempted to change its position on the incinerator construction. Three days after the protest march, the Panyu District government suggested inviting an expert to consult on a comprehensive plan for the district, with the residents invited to vote and decide on the plan. In addition, the Municipal Environmental Protection Bureau announced that it would assess the EIA for the incinerator and the final decision would be announced after the hearings. The project reached a breakthrough on 10 December, two weeks after the "stroll". The district government announced that construction of the planned incinerator would be postponed until 2011. Meanwhile, the district government released a document about waste management solutions and sought public opinions. Finally, the party secretary of the district was invited to attend a meeting with the residents of Riverside Garden on 20 December 2009. At the meeting, the party secretary announced that the project had been suspended as a result of the mass opposition and that in the future, public opinion on waste management in the district would be considered. It was also decided that there would be a study on the feasibility of introducing waste sorting in a small residential community (Construction of Panyu Incinerator Suspended 2009). The four-month campaign of activism had finally reached an end (Zero Waste Coalition' Is Formed Today).

After the campaign, the Panyu residents realized that municipal waste was a problem and that the city needed an efficient solution. They formed a volunteer group, Green Family (*Lüse Jiating*), in February 2010. Initially, Green Family primarily advocated waste recycling in local communities with the belief that recycling would fundamentally change municipal waste management in Guangzhou. Later, the group became more institutionalized and renamed itself "Eco-Canton". In June 2012, the group registered as an NGO with the Bureau of Civil Affairs of Guangzhou Municipality, which is primarily composed of residents of Riverside Garden, Clifford Estates and Huanan Country Garden. The newly founded ENGO aimed both to advocate zero waste in communities with the cooperation of the government and enterprises and to promote public participation in

environmental issues. To this end, Eco-Canton launched various activities to promote and establish a recycling community in the community (About Us).

At the same time, the Guangzhou municipal government implemented a series of new instruments for municipal waste management. The government planned to promulgate regulations on waste sorting in Guangzhou and establish more pilot points for waste sorting (Lai 2010; Zhang 2011). First, it launched a waste-recycling program in January 2011, that would later be rolled out to the city with the goal of halving the volume of waste in three years (Dai Dai 2010). Later, the Trial Regulation on Municipal Waste Recycling and Management (*Guangzhou Chengshi Shenghuo Lese Fenlei Guanli Zhanhang Guiding*) was implemented with aims of reducing the volume of waste that is sent to incinerators and landfills by 3.09% between 2012 and 2013, respectively (Huang and Chen 2013). What is more, the Public Consultative and Supervision Committee for the Urban Waste Management of Guangzhou City (*Guangzhoushi Chengshi Feiqiwu Chuli Gongzhong Zixun Jiandu Weiyuanhui*) was established under the Municipal Urban Management Committee in 2012. The committee aimed to create a platform for the communication, supervision and advocacy of municipal waste management (Xu 2012). Luo Jingming (Internet pseudonym “Basuofengyun”), who is the founder and CEO of Eco-Canton, was a member of both the first and the second cohorts of this committee.

In August and October 2012, the municipal government launched public forums on municipal waste management, to which it invited experts, a consultative committee and the general public to discuss effective measures for managing waste in the city. The municipal government appeared to have created a 3R city.

### *Anti-incinerator activism in Taipei*

Similar to Guangzhou, Taipei has experienced growing municipal waste for the past two decades. According to Ke (2006), the generation of MSW increased by 35% between 1981 and 1997 (the year in which an integrated recycling management policy was implemented) (Ke 2006). Because of increasing land scarcity, a huge amount of waste was dumped illegally, which aroused strong social discontent and even triggered conflicts between citizens and the government (Ke 2006). In addition, the process of democratization in the 1980s – which facilitated the growth of civil society – and the liberalization of the mass media have both enhanced environmental awareness and encouraged widespread discussion about the environmental impact of incineration and waste-management solutions.

The Taiwanese government initiated the “Solution for Municipal Waste” (*Dushi Lese Chuli Fangan*) in 1984 with the goal of expanding its landfills (Policy of Municipal Waste Management). However, this scheme did not effectively solve waste management problems because of Taiwan’s increasing land scarcity and the negative environmental impact around the landfills (Hsu 2006, 453). Later, the Taiwanese government promulgated an incineration-oriented strategy in the 1990s and initiated the “One City, One Incinerator” plan (*Yi Xianshi Yi Fenhualu Zhengce*) in 1994 as an alternative to landfills.<sup>1</sup> The plan proposed the building of 36 incinerators on the island. As the gap between waste generation and treatment continued to increase, illegal dumping proliferated and triggered more serious protests in the early 1990s. Finally, the total number of incinerators to be built dropped to 9 in 2002 (Friends of Nature and Green Citizens’ Action Alliance 2012).



Beitou is the second largest administrative district of Taipei City, and it is famous for its hot spring resorts (Taipei City Government). A waste incinerator was built and put into operation in this district in 1998; the public was not informed. Although the incinerator was only 800 meters away from the nearest community, few local residents were aware of its existence until they became frequently disturbed by the incinerator's odors and liquid leaking from the garbage trucks that drove into the facility every day. The ash and dioxins that were emitted by the incinerator also contaminated the surrounding farmland and caused the local farmers to experience direct economic losses.<sup>2</sup>

Between 2001 and 2002, Beitou's residents made multiple attempts to report the pollution to a hotline that had been set up by the Taipei municipal government; however, the government did not respond. Although Taipei's department of environmental protection convened a "Clear Air Meeting" in 2002 to resolve the conflicts between the incinerator operator and local residents, this arrangement and subsequent economic compensation<sup>3</sup> did little to reduce the pollution; indeed, the tension between local residents and the government increased (Hsu 2006, 453; Ke 2006, 58). The 2003 "Taipei-Keelung municipal waste cooperation" scheme (*Beiji Lese chuli Hezuo Fang'an*) intensified people's dissatisfaction.<sup>4</sup>

The Beitou residents formed investigation teams to follow the garbage trucks that drove to the incinerator at midnight; the investigation revealed that private garbage trucks dumped domestic waste and even industrial and medical waste into the government-run garbage trucks to be discarded. Beitou's anti-incinerator activists established a partnership with other ENGOs, such as the Taiwan Watch Institute (TWI, *Taiwan Kanshou Xiehu*) and the Green Citizen's Action Alliance (GCAA, *Luse Gongmin Xingdong Lianmeng*) to strengthen their campaign. With the support of the TWI and GCAA, the Beitou protesters organized several weekend meetings in the affected communities to explain the environmental and health threats that were posed by the incinerators to local residents.<sup>5</sup> Later, the Qili'an Environmental Voluntary Group (QLEVG, *Qili'an Huanbao Zhigongtuan*) was founded. The group primarily consisted of professionals, teachers, physicians, and city councilors from communities near the incineration plant (Ke 2006). In the same year, soon after its creation, QLEVG launched a protest involving more than one thousand local residents, and it finally attracted attention from the local media and local authorities. Additionally, QLEVG reported illegal dumping to the local judiciary and proceeded with legal action in February 2003 after a prosecutor discovered that the waste was being burned illegally. The operator of the Beitou incinerator was ultimately convicted of illegal waste burning (Ke 2006, 59).

Although the incinerator operation was not suspended, the Taipei municipal government built a theme park, playground, and swimming pool in the vicinity of the incinerator as "compensation" for the residents.<sup>6</sup> After receiving that compensation, the Qili'an Environmental Voluntary Group continued to express its dissatisfaction in public hearings and asked for a greater monitoring role in the incineration operation. As a consequence, the relationship between this newly formed green group and the government gradually changed. The Qili'an Environmental Voluntary Group proposed that the government use transparent plastic bags to display the materials to indicate the correct method of sorting garbage. The group also suggested that the government randomly inspect the incineration plant. The Taipei municipal government also installed 16 closed-circuit

television cameras inside of the plant to monitor its operation, and it regularly checked the air quality in the immediate area.

The Beitou incinerator has become a unique area in Taipei. Its harmonious coexistence with local communities and its contribution to the local economy – it attracts numerous tourists on a daily basis – have been credited as a representation of the successful transformation of the Taiwanese government’s waste-management strategy and social conflict resolution. The transformation from NIMBY (“not in my backyard”) to YIMBY (“yes in my backyard”) and the conflict resolution is credited with the successful transition and evolution of local anti-incineration activists and their networking with the Taipei-based ENGOs.

In short, close collaboration between ENGOs and the government took place. The local activist groups have abandoned confrontation and have become a monitor and facilitator of the government. QLEVG, the Qili’an Environmental Voluntary Group, plays a supervisory role in refuse collection and incineration. Their contribution changed government policy and the environmental protection administration’s implementation of “Key points on implementing public supervision of the incinerator operation” (*Quanmin Xiezhu Jiandu Lese Fenhuachang Yingyun Shishi Yaodian*) (Solution for Solid Waste), which provides that the public has the legal right to play a role in supervising the incinerator (Ke 2006).

## Discussion

The formation of an advocacy coalition and the process of policy change in both Guangzhou and Taipei are discussed in this section. Recalling Tong’s (2005) argument, a transitional society is in a process of political liberalization through which intensive political control will be relaxed and the nation will move towards a more liberalized or democratic political system (Tong 2005, 170). Mainland China has been experiencing a growth in civil society organizations; while Taiwan lifted martial law in 1987 and elected a president directly in 1996, the civil society and social movements play a crucial role in Taiwan’s democratization (Ibid.). In addition, multiple policy actors that are involved in the process of policy change are found in this comparative study and further represent a break from the perception of the low possibility of public policy changes in non-democratic countries.

In the ACF, coalitions to influence public policy are created among policy actors with expertise in policy domains (Sabatier and Weible 2007, 192). The policy actors primarily consist of governmental officials, lawmakers, social group leaders, researchers and journalists (Ibid.). Sabatier and Weible (2007) assert that the policy actors hold strong beliefs that affect public policy and the decision to act. Additionally, the ACF assumes the use of scientific and technical information to adjust this belief within the policy domain, as was found by Sabatier and Weible (2007). The ACF applies to both Guangzhou and Taipei in this research. First, the formation of coalitions was found in both cases. These coalitions compete with one another to influence public policy. Two coalitions – anti-incineration and pro-incineration – were found in each case. In Guangzhou, the residents lived at the proposed incinerator site; the anti-incineration coalition was formed by journalists and academic researchers. The anti-incineration coalition believed that the construction of an incinerator would have a negative impact on health and the ecological system.

Additionally, the coalition was dissatisfied about having been excluded from participation in the decision-making process that was related to the incinerator's construction. In addition, the protesters invited members of the NPC and CCPCC to support their grievances through personal connections. The pro-incineration coalition primarily consisted of governmental officials in the Panyu District and the Guangzhou municipal government, along with pro-incineration scientists. These actors supported the incinerator construction to reduce the volume of municipal solid waste and to improve urban management. The residents, green groups, and academic researchers opposed the construction of an incinerator for the same reasons as they did in Taipei, and the government officials supported the construction.

The advocacy coalition framework's emphasis on the use of scientific and technical information within coalitions amid the policy-learning process can also be found in both cases. The residents in the Beitou district primarily used an online discussion forum to express their opinions on the incinerator construction and connected to obtain support from green groups. In addition, the scientific data on incineration provided important information for both the pro- and anti-incineration coalitions in Taipei. For example, both coalitions invited scientists to present data on incineration and its impact on both health and the ecological system to support their stance in the policy learning process. The mass media and scientific and technological information also played an important role in the Guangzhou case. Unlike the case of Taipei, the role of the mass media will be addressed in the context of mainland China. Censorship is common in China, and most of the major mass media is controlled by the government. However, the anti-incinerator activism and pollution (or environmental degradation) have reportedly spread across China; and the protesters attempt to mobilize the mass media are not new in China. Most environmentalists themselves are either journalists or have strong personal connections with the mass media (Yang and Calhoun 2008, 77). Similar to the anti-incinerator activism in Panyu in this study, some of the protesters were both journalists from the Metropolitan Weekly (*Nanfang Zhoumo Pao*), which is one of China's most vocal newspapers (Buckley 2013), and some were residents of Riverside Garden. Accordingly, the journalists from the Metropolitan Weekly reported the incinerator construction and topics that were relevant to incineration. Additionally, other mass media such as newspapers and current affairs television programs widely reported the incineration and its impact, discussing the challenges of the community's increasing volume of municipal waste. Nanfang People (*Nanfang Renmu Zhoukan*) interviewed seven of the most prominent anti-incinerator organizers in Panyu in 2010 to share their stories and experiences that were related to organizing the campaign (<http://magazine.sina.com/bg/southernpeopleweekly/2010001/2010-01-12/ba82288.html>). The social media also influenced the activism in Panyu. Residents discovered the incinerator construction plan on the Internet and shared information in the online discussion forum where the anti-incinerator construction campaign began. Throughout the campaign, the Panyu residents discussed their campaign strategies and expressed their concerns about the incinerator. The Internet served as a platform for communicating and establishing networks between the policy actors, and it provided governmental documents, environmental laws, and scientific information on incineration. As environmental awareness increased, the protesters in both cases deployed scientific knowledge and environmental laws to protect their rights. The ACF argues that the policy actors will deploy

technological and scientific information that affects policy actors in the policy-learning process (Sabatier and Weible 2007). In these cases, the protesters used scientific data on the negative impact of incineration to pressure the government to suspend incinerator construction and to protect their legal rights through environmental litigation, whereas the pro-incineration coalition used scientific data in support of the safety of incineration during the construction process. Accordingly, two knowledgeable policy coalitions competed against each another to create changes in incineration policy.

In addition, the ACF addresses both the importance of openness in the political system and the degree of consensus among the policy actors, which also affect the behavior of policy actors. The ACF shows that a high degree of consensus achieves policy change in democratic regimes because of the openness of the political system (Sabatier and Weible 2007, 200), whereas multiple stakeholders can be involved in the policymaking process. In contrast, it is unlikely to achieve a consensus among stakeholders about changing public policy in authoritarian countries. Public participation is limited, and the domination of ruling elites in the policymaking process contributes to a low likelihood of policy change (Sabatier and Weible 2007, 200). However, this concern is invalid in the case of Guangzhou, as is found in this research study. In the anti-incinerator protest in Guangzhou (Panyu), the government did not suppress the protests; the municipal government promised to suspend the construction of the incinerator in Panyu District. These concessions by the municipal government are not new in China. Cai (2010) notes that local governments will make concessions in policy changes to reduce the risks of economic and political costs (Cai 2010, 4). Increasing demands from citizens are being seen with respect to various issues such as land acquisition, labor conditions, and environmental pollution, in which the local Chinese governments are experiencing challenges to their rule and even threats to their legitimacy in these social activism cases (Cai 2010, 4). Accordingly, concessions and policy changes from the local government represent one option for reducing political and economic costs. After the protests and other activist efforts, the municipal government legalized Eco-Canton, a green group that was organized by the protesters, and it established a public consultative committee on municipal solid waste management in Guangzhou City. The consultative committee invited the general public, including the chief executive of Eco-Canton, to become members of the committee with the aim of establishing a public consultative committee that would enhance public involvement in the decision-making process related to municipal waste management. Unlike public participation in environmental impact assessments, the members of the public consultative committees had more responsibilities for making decisions and monitoring municipal waste management in Guangzhou City. Thus, it represents a breakthrough in mainland China's public policy-making process, providing stakeholders with an opportunity to affect public policy and create a consensus-based policy change. This breakthrough was in part facilitated by the style of government in Guangzhou. First, as a forerunner in the reform era, Guangzhou has proven eager to implement innovative policies. It is a "place of social activism", with widespread public recognition of the need to establish a more responsive government. The subjects of this social activism not only include environmental protection, but also labor rights, land acquisition, urban management, etc. with campaigns highlighting the deficiencies of municipal government on the one hand and the rise of civil consciousness on the other. As such, social activism has pressured the municipal government to be more responsive. In December 2011, the

Party Secretary of Guangdong province, Mr Wang Yang (now serving as a committee member on the Political Bureau of the CCP), advocated the concept of “Environmental Democracy” (民主環保) in response to the increasing level of environmental activism in the province (Du 2011). According to Wang, environmental democracy means that the general public has rights of information, participation and supervision in all environmental issues. In addition, a policy for disclosing environmental information should be developed and an environmental consultative system established.<sup>7</sup> In the same month in 2011, Guangzhou’s government advocated an initiative called “Happiness Guangzhou” (幸福廣州) at the 10th Party Congress of Guangzhou. “Happiness Guangzhou” not only emphasized economic growth in the city, but also advocated the improvement of all aspects of living conditions and the drive towards a sustainable city. The scheme called for enhanced public participation in public affairs and promoted the growth of social organizations in the city (Tian, Zheng, and Ma 2011).

Although Taiwan has been democratic since 1996, the degree of public participation in its policy-making process remains controversial. In the case of the Beitou incinerator construction protest, the residents did not know about the incinerator until it was completed. They were excluded from the entire decision-making process. Environmentalists often criticize environmental policymaking processes that lack public participation. For example, a public hearing for an environmental impact assessment is often described as being non-transparent and restrictive (Civil Media 2013, 106). Indeed, this young democratic regime has interwoven traditional practices and newly formed democratic institutions. Grano (2015) states that local patronage networks are an important source of support to local government officials (Grano 2015, 20) and explains why environmental quality is frequently neglected by local governments.

Moreover, Sabatier and Weible (2007) argue that the coalition’s opportunity structure is a significant condition for policy change. The ACF assumes that a coalition opportunity structure mediates two sets of variables, which leads to public policy changes, including stable system parameters and exogenous factors (Sabatier and Weible 2007, 199). The stable system includes constitutional and social structures and natural resources, whereas the exogenous factors include changed public opinion and socio-economic situations (Sabatier and Weible 2007, 192). In the case studies, although the constitutional structures remain unchanged, the changes in public opinion and socio-economic situations that are discussed above paved the way to creating changes in the incineration policy in Taipei and Guangzhou.

In this section, two case studies are compared and illustrated to revisit the application of advocacy coalition framework and to discuss the possibility of policy change in transitional societies. By studying two cases of anti-incinerator building activism in Taipei and Guangzhou, it becomes clear that changes in public policy are possible in transitional societies, and the ACF’s premise of the impossibility of policy change in less-democratic political system is refuted.

## Conclusion

This paper examines the dynamics among policy actors through the lens of the ACF in the process of effecting policy change in two transitional societies: Taipei and Guangzhou. Although Taipei is a new democracy, its democratic consolidation is being challenged.

Since democratization, green groups have had more opportunities to be incorporated into decision-making processes; however, the state, local factions and conglomerates, and political parties have manipulated the political economy at the expense of distributional equality (Fell 2012, 40; Grano 2015, 20). The EIA system has been accused of corruptive and partiality toward local patronages and developers (Grano 2015, 32), whereas local communities and green groups make extra efforts to safeguard environmental justice. Although China's society has become pluralized during the period of economic liberalization, this activism has exerted pressure on the Chinese government. Growing social activism in China has led to policy concessions at the local level. This finding also challenges the idea of authoritarian environmentalism (Gilley 2012) because the ruling elites have been unable to control pollution during the past four decades of economic reform, given that the coalition opportunity structure has affected the interactions between state and non-state actors in the public policy-making process.

In comparing two anti-incinerator construction protests in Taipei and Guangzhou, both anti-incineration and pro-incineration coalitions are identified and their dynamics are revealed. The coalitions consisted of multi-policy actors and deployed scientific – technological information to achieve consensus on suspending the incinerator building. The rise of new well-off class with environmental awareness has become the driving force to form the coalitions as well as the emergence of the activism. In addition, the role of scientific-technological information was the exogenous factor to change social opinion on incineration as well as solid waste management in the cities. Furthermore, the anti-incinerator building activism in Guangzhou and Taipei has altered the relationship between government and society, which has reinforced the process of political transition. The establishment of a public consultative committee on solid waste management in Guangzhou and a collaborative partnership on supervising incinerator operation and waste management in Taipei has demonstrated public participation in the decision-making process and reinforced liberalization in transitional societies.

Finally, the dynamics among the policy actors in reaching a consensus to suspend incinerator construction in Taipei and Guangzhou have contradicted the ACF's assumption about the low degree of consensus in transitional regimes.

Overall, this study discusses the mechanism of the dynamics between policy actors and the process of policy change. By elaborating on the ACF, this study provides a useful and important understanding of the transitions in Guangzhou and Taipei. Drawing on the formation of political coalitions and interactions among policy actors we can identify the variables that affect the policy changes that were related to incinerator construction in Guangzhou and Taipei, and we have provided a lens through which to explore the larger issue of the political transformation of environmental management in these transitional societies.

However, although the cases in this research cannot be used to generalize the entire situation across societies, they certainly provide insight into the expanding literature on environmental management in both Guangzhou and Taipei.

## Notes

1. A fire occurred in a landfill located in the Neihu District of Taipei City in 1984, and the Taipei Environmental Protection Agency proposed the construction of an incinerator in the same

district. See Taiwan laji fenhua daiti yanmai, huanbao jingyan zhide dalu jiejian (Incineration replaces landfill in Taiwan, the mainland learns a new lesson), China News Service, <http://big5.chinanews.com.cn:89/gate/big5/www.chinanews.com/tw/2013/05-09/4802257.shtml>, accessed 23 September 2013.

2. Interview on 23 July 2013 in Taipei, Taiwan.
3. The Taiwanese government offered economic compensation to obtain support and decrease opposition in local communities with regard to the construction of incinerators. However, the compensation agreement is primarily generated by the central government and was standardized in each case. Compensation without a mechanism for negotiation between the incinerator developer and stakeholders is problematic; the government should seek support from local politicians and governments before constructing incinerators (Hsu 2006, 455).
4. The Taipei-Keelung Municipal Waste Cooperation's policy was to seek a mutual solution to the problem of municipal solid waste between the two cities. Taipei City burns Keelung City's waste; in turn, Keelung City manages the incinerator ash from Taipei City. The policy has raised a problem of unfairness because the burden on Keelung City is increased. For further information, see 北基垃圾處理緊急互助協議簽訂, 預計9月可全面上路 (Mutual Agreement on Taipei-Keelung Municipal Waste Solution has been confirmed, will be implemented in September), Nownews, 22 July 2003, <http://www.nownews.com/2003/07/22/330-1486784.htm>, accessed 5 September 2013.
5. Interview on 23 July 2013 in Taipei, Taiwan.
6. Interview on 23 July in Taipei, Taiwan.
7. Ibid.

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