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GLOBAL WARMING CAMPAIGNS IN BANGKOK:
FRAMING ANALYSIS AND CAMPAIGN EFFECTIVENESS

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A Dissertation Submitted in Partial Fulfillment of the Requirements
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หน่วยงานกรุงเทพมหานครได้ทำการรณรงค์เรื่องภาวะโลกร้อนอย่างต่อเนื่องตั้งตั้งแต่ปี
พ.ศ. 2551 อย่างไรก็ตามปริมาณการปล่อยก๊าซภาวะเรือนกระจกไม่ได้ลดน้อยลง งานวิจัยชิ้นนี้
จึงสนใจที่จะศึกษากระบวนการสื่อสารการรณรงค์ภาวะโลกร้อนของกรุงเทพมหานคร ในฐานะ
หน่วยงานที่ดูแลด้านการกำกับนโยบาย และสื่อสารสัมพันธ์กับประชาชนในเขตกรุงเทพมหานคร
โดยมีเป้าหมายการวิจัยเพื่อต่อยอดองค์ความรู้ของทฤษฎีกรอบความคิด และการนำไปสู่แนวทาง
การสร้างงานรณรงค์ที่มีประสิทธิภาพมากขึ้นในอนาคต งานวิจัยชิ้นนี้เป็นการวิจัยแบบผสม
ระหว่างระเบียบวิธีวิจัยเชิงคุณภาพ และระเบียบวิธีวิจัยเชิงปริมาณ ประกอบไปด้วย 1) การ
สัมภาษณ์แบบเจาะลึกกลุ่มผู้เชี่ยวชาญด้านภาวะโลกร้อนในประเทศไทย 2) การวิเคราะห์
เอกสารที่เกี่ยวข้องกับการรณรงค์ภาวะโลกร้อนของกรุงเทพมหานครตั้งแต่ปีพ.ศ. 2551-2553 3)
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เปรียบเทียบกรอบที่พบเพื่อสร้างกรอบใหม่ที่เหมาะสม

จากการวิจัยพบว่ากรอบที่พบมากที่สุดจากการสัมภาษณ์ผู้เชี่ยวชาญ คือ กรอบเชิงสังคม
ในขณะที่กรอบที่พบมากที่สุดจากเอกสารที่เกี่ยวข้องกับการรณรงค์ คือ กรอบเชิงการเงิน และ
สุดท้าย กรอบที่พบมากที่สุดในกลุ่มเป้าหมาย คือ กรอบเชิงวิทยาศาสตร์ อย่างไรก็ตาม
กรอบที่ไม่เด่นชัด แต่พบทั้งในกลุ่มผู้เชี่ยวชาญ และกลุ่มเป้าหมาย คือ กรอบเชิงวัฒนธรรม
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ประเมินการรณรงค์ให้มีประสิทธิภาพ และสามารถนำเสนอทางออกให้แก่การรณรงค์ได้อีกด้วย
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ได้อีกทั้งในเชิงลึก เช่น วิเคราะห์ข้อมูลด้วยวิธีการอื่น และในเชิงกว้าง เช่น การขยายกลุ่ม
ตัวอย่างออกไปในจังหวัดอื่นๆ ข้อค้นพบจากงานวิจัยชิ้นนี้สามารถนำไปประยุกต์ใช้สร้างการ
รณรงค์ครั้งต่อไปของกรุงเทพมหานคร

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TEERADA CHONGKOLRATTANAPORN: GLOBAL WARMING CAMPAIGNS: FRAMING ANALYSIS AND CAMPAIGN EFFECTIVENESS. THESIS ADVISOR: ASSOC. PROF. YUBOL BENJARONGKIJ, Ph.D., 285 pp.

Thailand has responded to global warming with strategies of mitigation and adaptation. Green campaigns targeting citizens have not significantly improved environmental behaviours, particularly in the Bangkok metropolitan area. This research will identify and analyse the frames held by global warming experts in Thailand and those used in the Bangkok Metropolitan Administration (BMA) environmental campaign as well as frames reported by target audience members before and after the campaign. All frames will be compared to identify campaign effectiveness based on their consistency. The use of framing theory in this way to evaluate campaigns will be an innovation in bridging the different traditions as well as research methods in the field of communication studies.

From in-depth interview with the expert, it turned out that the dominant frames are Social Frames. The most common frames found in campaign materials are Financial Frames. Finally, the survey of target audience members demonstrates the relationship between frames held before and after the campaign and that the Scientific Frame are mostly reported. From the integrative analysis, the inconsistency of frames emerged in three main elements in this campaign communication can be a part of ineffectiveness of BMA campaign in encouraging citizens' change of action. Therefore, combining existing traditional frames (e.g. Buddhism and King's Philosophy of Sufficient Economy Frames) and perceived global warming frames (e.g. Scientific Frames) can be used to create better response in dealing with this issue particularly among residents in Bangkok. Theoretically, framing analysis can be applied to study campaign communication and to be extended to the Thai context. The results can also be used to create the effective global warming campaigns for Thailand in the future.

Field of Study.....Communication Arts..... Student's Signature

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I would like to contribute my dissertation to the knowledge of the better world for the next generation. The world will not get any better if we just let it be.

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CHAPTER I

INTRODUCTION

1. Background and Justification

“What we take for granted might not be here for our children.”

Al Gore (Inconvenient Truth, 2006)

The research took a framing theory approach to examine the global warming campaign process of Bangkok Metropolitan Administration (BMA). A mixed methods research design was applied to reveal and test the frames found in the heads of global warming experts in Thailand, the BMA global warming campaign materials, and the campaigns' target audience members. Comparisons of these frames will be undertaken made in order to ascertain the most common and uncommon frames. This will then help to identify what should be included in the reframing of global warming campaigns within the Thai context. In-depth interviews with experts will be employed to assemble data from which dominant frames will be identified through analysis. The campaigns have achieved effectiveness in creating awareness. However, are there inconsistencies in the frames within the three main elements -- the framing sources, the mediated campaign materials and the target audience members -- in this campaign communication? Can combining existing traditional frames (e.g. Buddhism and King's Philosophy of Sufficient Economy Frames) and perceived global warming frames (e.g. Scientific Frames) be used to create better response in dealing with this issue particularly among residents in Bangkok? Theoretically, framing analysis can be applied to the study of campaign communication within the Thai context.

Of all the environmental issues emerging over the past few decades, global warming is the most serious, and the most difficult to manage (Dessler and Parson, 2006). Not only do many scientists agree with the assessment of the gravity of the problem of global warming (Pittock, 2005), but communication scholars also recognise the seriousness of the issue (McComas and Shanahan, 1999; Wilson, 2000). Even though several aspects of global warming have been raised in the ongoing debate among scientists, one major point that every sector agrees upon is that human inducement is the main cause (IPCC, 2007). Thus, campaigns are employed to raise awareness as well as to change attitudes and behaviours in order to alleviate the prospective worsening of the situation.

There is no doubt that global warming is currently a major threat locally and internationally with human beings being responsible for this phenomenon (Spence, 2005). The root of the problem lies with large-scale and unsustainable economic production and consumption activities, starting from the industrial revolution and continuing into the contemporary era. Based on the theory of 'post-ecologist' politics, "the important question is not the reality of ecological damage, degradation, human-induced health problems etc., but rather for what reasons and to what extent such phenomena... can be conceptualized as problems and crises" (Barry, 2007: 260). In other words, the key question in relation to today's environmental problem is not what the problem is, but rather who says it is a problem or how it is perceived as one. Environmental science may not be able to address these questions.

The global warming issue was popularized by Al Gore's documentary movie, 'An Inconvenient Truth' (2006). The movie depicted human activities as the major causes

and worldwide disasters as the consequences. The impact of global warming being so incredibly vast, its complete reality was too great in scale and complexity to be captured within a 100-minute film. Considered a ramification of industrial development, global warming is a contemporary environmental issue still in need of further scientific inquiry for society to be better equipped to tackle the problem as well as to communicate with lay people who are likely to be affected by it and who have the capacity to cope with it.

The public is aware of the term “global warming,” but not energized by it to act. Apparently, a high level of awareness and a better understanding of the science underlying climate change do not directly or necessarily translate into concern or action. “Better communication goes beyond simply designing more effective ways of conveying information from an expert to a lay audience (Dilling and Moser, 2007). It requires the interdisciplinary knowledge to effectively tackle this particular issue. One important dimension is to “know thy audience” which will help to improve current practice and to ultimately offer ways to envision new practices.

Global warming becomes a ‘cliché’ term added to any advertisement, campaign or even school text. In fact, the marketing of energy efficiency and alternative energy sources can be done without drawing any links to global warming (Dilling and Farhar, 2007). The term, nevertheless, adds a robust dimension to the problem and can be aligned with a no-regrets policy. Most people know what it is but they still do not know exactly what they can do to truly help solve the problem. Most of the time, responsibility is attributed to the giant nations. Cited by Taverne (2005), Tony Blair says, “If we don’t have America, China and India taking the action necessary to reduce greenhouse gas emissions, then we don’t solve the problem of climate change.” Based on the Kyoto

Protocol argument, from the viewpoint of Western culture, focusing on technology and research and development will contribute to a solution, rather than focusing on emission reductions and attendant penalties for failure to meet them. At this point, the rapid development of new technologies, combined with the speedy application of the best available technologies, appears to be the response of choice from the Western market. Technological solutions already have considerable cultural resonance. Hollywood celebrities – as well as stars from Thailand – have made it fashionable to own fuel-efficient hybrid vehicles. This eco-friendly fashion has come into vogue among opinion leaders in megacities. However, energy efficiency can be a more participatory practice that requires bottom-up campaigns to increase voluntary actions and adoption of more efficient tools and practice, coupled with top-down mandatory standard-setting and incentive programs.

The issue is complex in terms not only of its impacts, but also its causes and potential solutions (Pittock, 2005). It is posited that the causes could be based on geological changes and cycles of earth temperature (e.g. transition from ice age). Impacts can also be seen as direct and indirect regardless of the level of severity and their local or international scale. Direct impacts are faced by those at sea level and in residential areas and in terms of temperature change and fluctuating crop yields. Indirect impacts include social and economic effects such as commodity price fluctuations and resource-related territorial wars. There are two broad strategies available for coping with this problem at present: adaptation and mitigation. In spite of the concrete details of these two approaches, the policy debate is intense both within nations and among different alliances (Dessler and Parson, 2006). The Kyoto Protocol,

for instance, is an international attempt to tackle the problem and provides a concrete implementation for the member countries, divided by stages of development, from developed to less-developed. The protocol continues to inspire several questions which deal inter alia with efficiency, probability and internal fairness (Pittock, 2005). There is a diversity of views about this issue arising from scientific and political arenas. However, scientists, politicians and scholars cannot solely alleviate the impacts. In fact, the solutions are ultimately in the hearts and minds of lay people.

Even though global warming is considered a real and serious problem, it remains a low priority relative to other national and environmental issues, particularly in Thailand. In other words, global warming currently lacks a sense of urgency (Moser and Dilling, 2004). A possible explanation for this phenomenon is due to the “sticky” characteristics of global warming as a future orientation based on scientific information (Ungar, 2007). First, predictions for the doubling of pre-industrial CO₂ levels are for the relatively distant year of 2060. This doubling can be considered a benchmark measure, as the number is high enough to grab people’s attention. This particular estimation is also significant because scientists assert that their computer models of the climate system are too primitive to deal with smaller changes on a short-term basis (Miller, 2004). Currently, they are only beginning to collect long-term observations that could be used to document climate change over time. It is clear that in order to generate concern, the size of the impacts delineated in scientific scenarios has to be sufficiently large or visible on a human scale (e.g. a few meters of sea level rise, rather than a few centimetres) that would take decades to occur on a natural scale. Lastly, since computer models are still too coarse in their resolution to predict fine-scale changes,

extreme weather events, in particular, cannot be directly attributed to climate change. According to Ungar (1999), by implication, efforts to reverse this trajectory and claim that “strange weather” is a sign that climate change is already occurring have largely failed. It can be concluded that from the point of view of ‘selling’ the problem, a future orientation creates a clear discursive liability since concern about the future is discounted in virtually every institutional realm (Cline, 1992).

Moreover, the limitations of marketing a social problem derive from the capacity of relating people to an unfamiliar concept. Ungar (2007) defined this situation as the availability of “bridging metaphors” to popular culture. Scientific ideas and results are encoded in a distinct language and need to be decoded to be accessible to the public. For lay people to grab the sense of a certain issue, they require an explanation to accept and understand something that they have never heard before. The addressing of the ozone hole issue in American society, for example, can be considered to have been a success. The term, global warming, can be encapsulated in a simple, direct, and widely familiar penetration metaphor. Stated succinctly, the hole leads to the increased bombardment of the Earth by lethal rays. This visualized metaphor meshes nicely with abiding and resonant American cultural motifs, including “Hollywood affinities” ranging from the shields on the Starship Enterprise to Star Wars. Apparently, the penetration model is ubiquitous in video games and children’s television shows. Thai audiences are also massively influenced by American culture via mass media. They may only comprehend what has happened but the reality is not sufficiently close to home – and therefore not so urgent in their minds (Wanthai, 2009; Kasemwit, 2008). Despite still having high GHG emissions, Bangkokians are aware of the global warming problems

(95.7%, N=3,900) and do possess basic information about emission status such as the causes and impacts of global warming (National Statistical Office, 2010). Even though they try to actively participate based on their awareness, this has not been reflected in the reporting of gas emissions in 2007 by the Bangkok Metropolitan Administration. The tendency for these emissions to rise has continued according to the climate model generated by Southeast Asia Regional Centre of the Global Change System for Analysis, Research and Training (START). The photos below were created using the dynamic downscaling technique with PRECIS regional climate model software from the Met Office Hadley Centre for Climate Change in the United Kingdom. The calculation was derived from the global climate model data of the ECHAM4 A2 scenario from the Max Planck Institute for Meteorology, Germany.

Figure 1: The Temperature Model for Thailand in the Future

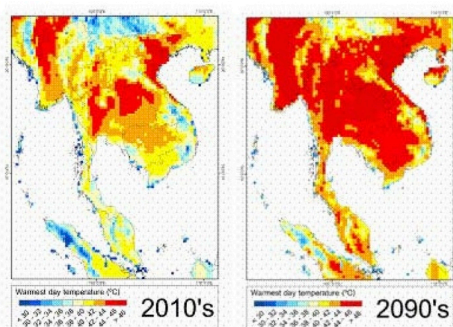
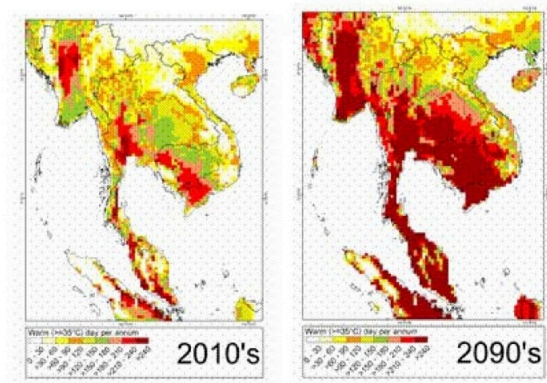


Figure 2: The Summer Temperature Prediction Model



Several communication researchers have been attempting to address the global warming issue drawing on communication theories. Most of these endeavours have placed the emphasis on communication utilizing mass media; however, they have drawn on a variety of concepts and theories. Some emphasise the role of communicators, in this case journalists, and news production (Wilson, 2000), while others focus more on impact and audience research (McComas and Shanahan, 1999). Brossard, Shanahan and McComas (2004) also incorporated a cross-cultural approach into studying coverage of global climate change. Despite there being a large number of titles addressing the issue to be found on the shelves of popular bookstores, relatively few academic works on global warming are available in scholarly libraries. This is particularly the case in communication studies in which, besides the global warming issue per se, environmental communication books are not that popular. This study itself is an attempt to study environmental problems from the communication lens adding to the relatively sparse literature that currently exists.

When social problems erupt, one classic response of governments and organizations is to wade in with a campaign. The goals are often noble, the dollars spent gargantuan, and the outcomes all too predictable. The assumption is that messages

seem to change the behaviours of some people some of the time but have almost no discernible impact on most people most of the time. Dunwoody (2007) claims that the situation has so discouraged policy-makers in the past that the pattern was given its own dismal label – ‘minimal effects’ – with the earliest appearance of the term being in the work of Lazarsfeld, Berelson, and Gaudet (1944). This is also the case in Thailand where the government assigned the Ministry of Agriculture and Cooperatives to be in charge of the four-year budget plan to manage, protect and alleviate climate change in Thailand as pledged under the United Nations Convention to Combat Desertification from 2008 to 2011 (Bangkok Metropolitan Administration, 2007). The budget has been allocated to three major segments including research and development (208 million baht), agricultural protection and alleviation from global warming (437 million baht) and public relations (294 million baht). As can be seen, the amount of money spent on communicating with the public is higher than research and development. The major question that arises is whether the allocated funds are worth spending. The result is possibly another classic case of minimum effect with the volume of gas emissions in Bangkok continuing to increase.

Global warming is a mix of both informative and persuasive communication coloured by the factor of uncertainty. In order to inform and persuade on a selected issue, there are several communication platforms that are employed by organizations to reach target audiences. These platforms range from mass media to interpersonal channels. Regarding environmental communication, when it is time to call for an action, the advocacy campaign is a useful option to share specific information, policies, ideas or sets of values, as well as to persuade the audience to think, believe and act in a

preferred manner (Cox, 2007). Broadly, campaigns can be defined as the umbrella title for any activity designed to produce a planned outcome (Franklin et al., 2009). The work of campaign is aimed at the public good. Therefore, it is most often encountered in the work of charities and the NGO sector. Global warming campaigns are therefore appropriately examined using a communication approach.

In a chapter on environmental persuasion, O'Keefe and Shepard (2002) assert that environmental programs aimed at public awareness, understanding, attitudes, and behaviors have a relatively short history, even though the topic itself is a unique challenge to communication strategies. They also cited Chechile (1991) who noted several perplexing factors in environmental decision-making including issue complexity, scientific conflict, and the need for interdisciplinary approaches. The global warming issue is a good illustration of these factors. First, the issue is complex in terms of definitions, causes, impacts, and solutions. There are on-going debates nationally and globally. The scope ranges from individual household activity to international cooperation agreements, even in terms of a single issue such as the one related to lowering carbon emissions (Goodall, 2007). Second, the scientific conflict is demonstrated in major claims of the "climate skeptics" (Dessler and Parson, 2006). There are, for example, claims that state variously that the earth is not warming, the earth may be warming but human activities are not the cause, and future climate warming will almost certainly be negligible. The first two claims are based on conceptualizations of the issue that often have a political ideological basis. They focus on particular characteristics of the environmental problem, such as that it is related

primarily to the issue of global warming. However, the last factor, identified above, is predictive and therefore raises methodological questions.

It is suggested that the characteristics of the problem, the way people perceive and process information, and the motivators and barriers to action need to be examined through a new lens. The study should be able to integrate multidisciplinary knowledge in communication and social change (Dilling and Moser, 2007). Interdisciplinary approaches are required to study global warming issue. Due to the multiplicity of impacts associated with the issue, an investigation cannot be launched expediently from the silo of a single perspective. The global warming debate is where science meets politics especially in arguments for or against certain policy (Dessler and Parson, 2006). Positive statements are used as claims of scientific fact. A positive claim concerns the way things are while a normative claim concerns how things should be. The normative statements involve value judgments and are often used in mustering social and political support. Global warming policy-making requires some flows between scientific and policy debates. Thus, it is difficult to segregate scientific knowledge from social thought in this matter. The environment is frail and our knowledge about it fractured. There is an opportunity to extend knowledge through a cross-disciplinary study.

Robert Craig (1999) provides a sketch of the field of communication studies that depicts seven traditions, including rhetorical, semiotic, phenomenological, cybernetic, sociopsychological, sociocultural and critical. In his summary, thinking across these traditions raises some problems such as strategy versus authenticity (rhetoric or social psychology versus phenomenology), the problem of intentionality versus functionality (rhetoric or phenomenology versus cybernetics), the problem of proving the

effectiveness of techniques (social psychology versus rhetoric), the problem of instrumental reason as ideological distortion (critical theory versus cybernetics or social psychology) (p. 87). This research, however, is an attempt to overcome some of the problems mentioned.

Responding to Craig's (1999) suggestions of the field of communication theory, the title of this research, Global Warming Campaign in Bangkok: Framing Analysis and Campaign Effectiveness, displays the variety of concepts from different perspectives within communication studies. First, global warming campaign is a specific category of environmental communication. According to Robert Cox (2007), in his more general definition, environmental communication means both thinking and doing and is:

"[t]he pragmatic and constitutive vehicle for our understanding of the environment as well as our relationship to the natural world; it is the symbolic medium that we use in constructing environmental problems and negotiating society's different response to them."

Not only should environmental communication educate, alert, persuade, mobilize and help us to solve the problems, but it should also constitute or compose representations of nature and environmental problems in people's perceptions. Apparently, there is a need for both comprehension and actions regarding environmental issue. Based on this philosophy, global warming is the appropriate option to study because it provides both the controversy of definitions and solutions (Dessler and Parson, 2006).

There is a tremendously high number of campaigns launched and carried out by different sectors as a part of global warming trend. However, the most prominent and

active organization that can be seen in many global warming publications and recognized by key sources of global warming in Thailand is Bangkok Metropolitan Administration - BMA (Teerada Chongkolrattanaporn, 2009). It is selected as the link between policy and actions. BMA has been actively working on this particular issue as declared in its Action Plan on Global Warming Mitigation 2007-2012. Initiated by Mr. Apirak Kosayothin, the former governor of Bangkok, the priority of the BMA plan is to address the need for long term global warming mitigation strategies involved hosting a meeting with organizations and agencies from both the private and public sectors to set guidelines for collaboration on addressing global warming problems. As a result, on 9 May 2007 at the United Nations Building in Bangkok, 36 organizations jointly signed the Bangkok Metropolitan Administration's Declaration of Cooperation on Alleviating Global Warming Problems. Global warming campaign projects have been conducted regularly since then. Up to the present, Mr Sukhumbhand Paribatra, the current governor of Bangkok, continues the work on the global warming campaign including through hosting the conference on "ASEAN +6 City Forum on Climate Change Bangkok 2008", from June 26-27, 2009. With the participation of the committee of Intergovernmental Panel on Climate Change, IPCC, the conference led to ASEAN support for the United Nation Framework of Climate change (UNFCCC) and eight agreements aimed at reaching the Millennium Development Goals (MDGs) as well as the Johannesburg Plan of Implementation: JPOI. Not only does BMA place emphasis on international cooperation, but it also encourages people in Bangkok to care more about the issue. Several projects concerning global warming were organized such as Green Bangkok Bike and Fancy Walk to contribute to lessening Climate Change. BMA campaign projects would be

suitable for analysis because they play an important role in the management of all aspects of the issue of global warming, including cause, policy, effects, problems and solutions.

The theoretical approach to this research is Framing Theory. This approach can be traced back to two main conceptual foundations, one sociological and the other psychological. The sociological conception is symbolic interactionist and arises from the views of George Herbert Mead. Influenced by Mead, Erving Goffman developed Frame Analysis (1974). He posited that in order to make sense of life experiences, human beings use “schemata of interpretation”, labeled as “frames”, to locate, perceive, identify, and label occurrences or information (Goffman, 1974, p. 21). Further from the same perspective, a frame is defined as a “central organizing idea or story line that provides meaning” (Gamson and Modigliani, 1987, p. 143). Correspondingly, the psychological conception is based on the same assumption with sociological literature. Focusing on information processing, the psychologists or other cognitively oriented researchers associate a framing with other related terms such as “schema” or “script” (Fiske and Taylor, 1991) implying the concept of a template or a data structure (Minsky, 1975). The overlapping conceptions suggest that frames function as both “internal structures of the mind” and “devices embedded in political discourse” (Kinder and Sanders, 1990, p. 74). In other words, not only can the notion of frame be used to study cognitive processes, but it can also be a heuristic device to understand the communication process. Manuel Castells (2003) has recently identified frames as important features in communication and power.

Reviewing Gitlin's (1980) definition of frames as "persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion..." (p. 7), Reese suggests that frames have power "to bring amorphous reality into a meaningful structure." Therefore, "frames are active, information generating, as well as screening devices." (p.11). Issues are framed as a result of social and institutional interests (Reese, 2003). The social and political influences play important roles in the global warming campaign framing process. Those with social interests vis-à-vis global warming include experts, environmentalists and journalists and are identified for the purposes of this thesis as 'social actors'. This includes agents whose professions are relevant to social work. Thus, their works have more direct influence on publics in general and their communication ways are more intimate to the lay people. Those with political interests vis-à-vis global warming include BMA officials and are identified for the purposes of this thesis as 'political actors'. This covers those whose responsibility is connected to political works such as national planning, policy and enforcement. Their impacts on environments are explicit through the laws and bills they pass to enforce with citizens. The direction of environmental solutions is also geared by their involvement and works.

Focusing on the audience, framing concept is rooted in "lived social experience" from a phenomenological perspective (Littlejohn, 2005). Attempting to understand how human knowledge relates to the world, framing is used to provide tools for examining the knowledge, structures, or, as Tucker (1998) suggested, empirically measuring the construction of commonsense. Referring to the different ideological realm of ontology and epistemology, Reese (2003) concluded that framing provides an important bridge

connecting areas that for too long have been unduly compartmentalized including the critical, qualitative, and ideological perspective and the behavioural content, audience and effects tradition (p. 9-10). Moreover, it is necessary to learn the audience's frames because individuals are not passive receivers. In fact, communications are actively filtered through the 'lens' of a priori belief and value systems. The structure and content of these systems are based on cultural experiences and norms, which may vary among diverse communities (Vaughan, 1995). Therefore, learning the existing frames of certain communities will help to apply the appropriate frame to communicate with them. However, it is important to note that even existing can be changed as frames are in constant evolution and even radical transformation (Chitty, 2010).

Framing is also essential when there is a need to communicate to a broad audience, particularly where the communicators and recipients are from different communities. Based on two cases of how organizations communicate risk to low-income and minority communities, framing the problem is the first priority among five tactics (Agyeman et al., 2007). Mostly, citizens in poor, rural areas and disinvested inner urban cores are likely to be skeptical of programs that originate outside their community. It is suggested by Taylor (2000: 58) that "the environmental justice 'frame' is a master frame that uses discourse about injustice as an effective mobilizing tool." In other words, frames can mobilize people especially when applying certain frames for certain audiences. The issue or problem frame should tap into people's dreams and fears in their homes and local communities and address their concerns. Thus, communicators must bear in mind that there is no such 'perfect frame' to use with every group but framing can be a useful tool when applied effectively. The communicators need to

recognize the real concerns, constraints, and strengths in various communities and use them to promote the issue and mobilize different communities to join the arena of global warming conversation.

Framing can also be an indicator of campaign effectiveness. In mass media study, framing theory is related to agenda setting and is used to understand the media-effect process. Even though one campaign may strategically consist of various types of communicative platforms, ranging from those using interpersonal, through traditional (folk) and modern (mass communication), to post-modern (convergent), framing can be employed as a 'soft tool' in the construction of campaigns. It can also be employed in analysing campaigns, though this has not been done in the past. The analysis can be based on chronological order, starting with frames people have in their minds before the campaign and following up with the post-campaign frames in their minds. Comparative frame analysis can work as a concrete tool to map the change or development of people's mental models. The current study is innovative, in employing framing analysis to analyse an environmental campaign.

There is a call for a new way of framing climate change that facilitates meaningful dialogue and collective solutions. The new ways need to go beyond persuasion and employ a non-polarizing framing of the issue (McNeeley and Huntington, 2007). In Thailand, we need new ways of talking about climate change to make it become truly critical within and beyond the city and to affect conversations elsewhere. Institutions commonly mediate the relationship between governments and communities, and they may also play an important role in voicing people's concern with climate change across levels of government. There is an attempt at creating a network

of several organizations involved with global warming issues in Thailand. This green link can be divided into four major sectors. First, the law and policy group includes Department of Environmental Quality Promotion, Office of Natural Resources and Environmental Policy and Planning, Thailand Greenhouse Gas Management Organization (Public Organization) (TGO). The second sector consists of energy related organizations such as Ministry of Energy, Energy for Environment Foundation, and the Energy Research Institute at Chulalongkorn University. The third is related to flora and fauna and includes the Royal Forest Department, Tropical Forest Foundation, World Wildlife Fund, and Foundation for Ecological Recovery. The last sector concerns the environment and includes Green World Foundation and Greenpeace (South East Asia). Even though these above-mentioned organizations invest effort in battling global warming together, there is one organization that can influence government, the media and the public at large and has this as a major responsibility - BMA.

The global warming frames created by BMA also reflect the other information campaigns from above organizations. Since the environmental movement works most effectively as a network, it is impossible to isolate the effects of one campaign on another. Nevertheless, BMA can be a distinctive choice as an organization that can work hand in hand with both government and people in Bangkok. Their frames can be significant enough to represent the concept of global warming in the capital city of Thailand. This research will examine the global warming campaigns of BMA using the framing theory to analyse the campaign communication process including the communicators, campaign discourse, target public and context.

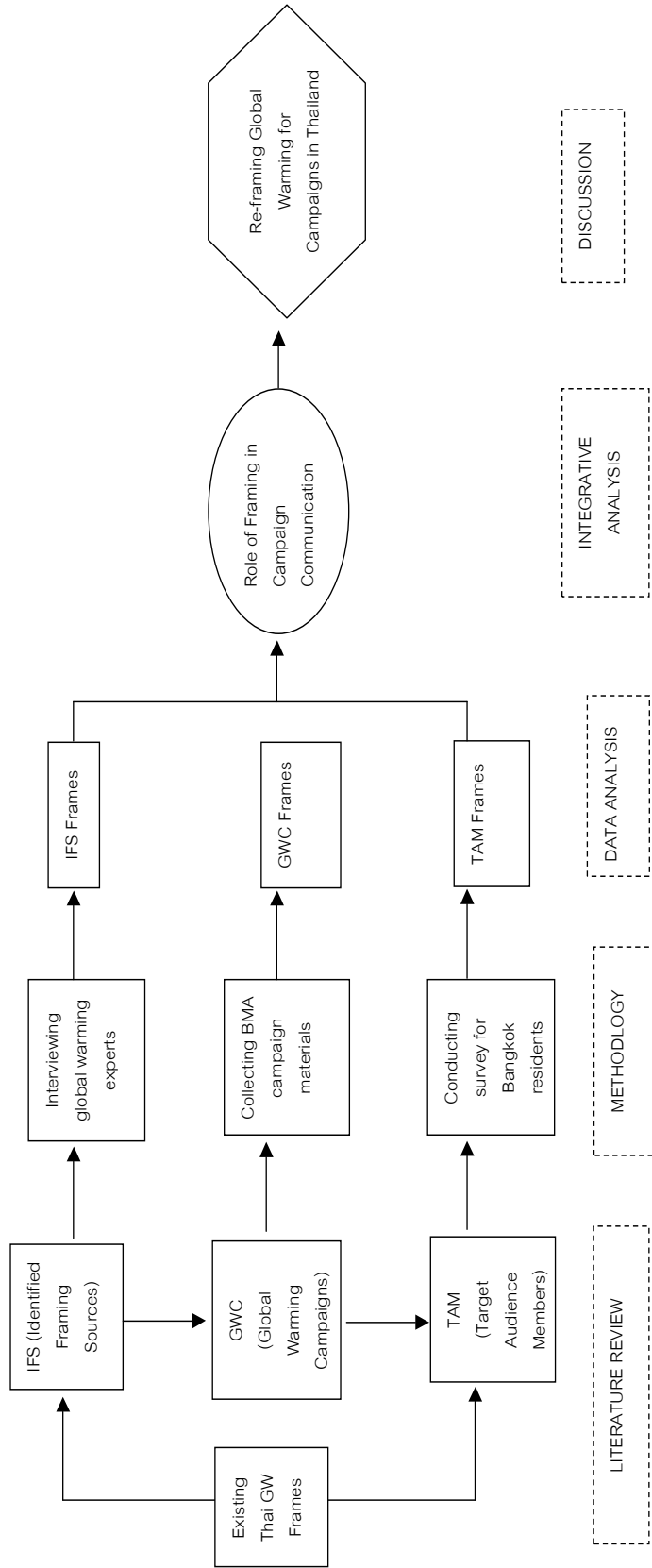
The scope of this research will cover the content related to campaign programming in Bangkok. The text will be drawn from the campaign documents directly from the involved organizations and indirectly from mass media. The content will also include information from other aspects of the process of campaigning namely research, planning, and evaluation. This research will include only the campaign projects in Bangkok where the problem seems to be actively coped with by both government units and private sector organizations. In Thailand, the global warming issue is of greatest concern mostly within Bangkok and littoral provinces because causes and effects are apparent in these areas. It is useful to compare the carbon emission percentages among four economic areas viz. industry (40%), building and residential (31%), transportation (22%) and agriculture (4%) (IPCC, 2007). The three areas scoring over 20% are all urban and mostly part of the Bangkok metropolitan region. Therefore, the focus will be on Bangkok residents, government policy makers and officials of BMA. Strategic frame analysis is a broad multidisciplinary team-research method to examine how an issue is framed and should be framed in order to effectively create change (FrameWork Institute, 2009). This research will employ a modified strategic frame analysis. The question to be asked is 'what will be the best communicative model for a global warming campaign'? Once this question can be answered the results can inform practice in the future. The intention is that new strategies will contribute to the mitigation of global warming. The time range for the study commences with the start-up of the global warming campaign in 2006 and ends in 2009.

The expected outcomes from this research can be divided into theoretical and practical aspects. In term of theory and concepts, this research is an attempt to extend

the knowledge of framing theory into the literature of campaigns and of environmental campaigns into framing theory. The analysis of framing on global warming campaign will include communicators, text, audience and the context nationally and internationally. The ultimate hope is to theorize the phenomenon of global warming campaign in Bangkok with framing theory as the analytical tool and effectiveness indicator. The theory will lead the connection between public relations and mass communication approaches. From the social viewpoint, an outcome will be that the findings may be applied by public relations practitioners, journalists, and policy makers. This study can also be helpful to environmentalists who focus on global warming. It is hoped that this research will help nourish further environmental communication research and more campaign action to save our planet. The visualization of this thesis framework is provided in Figure 3 Research Framework:

RESEARCH FRAMEWORK

Framing Process of BMA Global Warming Campaign



2. Objectives

The objective of the thesis project is to uncover the role played by framing in the relationship between the Thai BMA global warming campaign¹ and its target audience members.

1. To identify campaign framing sources (Identified Framing Sources – IFS)

- Review literature on environmental campaigns (Chapter 2) and framing theory (Chapter 3)

2. To identify BMA's construction of campaign frames (BMA-Identified Campaign Frames, ICF)

- Analyse campaign documents
- Conduct interviews with BMA officials involved with the campaigns

3. To identify mediated global warming frames before and after campaigns in target audience members (TAM)

- Analyse media texts with content analysis method
- Conduct interviews with global warming experts
- Administer questionnaire to target audience members

4. To compare IFS, ICF and TAM frames

- Review literature of framing theory – Chapter 3.1
- Review literature of global warming frames – Chapter 3.2
- Administer questionnaire to TAM

5. To find out experts' suggestions for re-framing global warming in campaigns and the media.

- Conduct interviews with global warming experts in Thailand

¹ Henceforth referred to as campaign in the objectives and research questions.

3. Research Questions

1. What were the private frames on global warming in Thailand (before and after)?
 - 1.1 What were the private frames of the expert himself or herself?
 - 1.2 What in the expert's view were the private frames of individuals belonging to professional groups in various sectors?
 - 1.3 What were the private frames of campaigners (e.g. BMA officials, BMA consultants)?
 - 1.4 What were the mediated frames in the views of the experts?
 - 1.5 How should global warming be re-framed in Thailand?
2. What were the mediated frames portrayed in the BMA campaign on global warming in Thailand?
 - 2.1 What were the frames presented in BMA primary campaign materials (e.g. printed materials, activity details)?
 - 2.2 What were the frames presented in BMA secondary campaign materials (e.g. news releases, news reports)?
3. What were the global warming frames in minds of target audience members before and after the global warming campaigns of BMA?
4. What are the relationships among the expert private frames, the campaign frames, and the target audience members' frames on global warming in Thailand?
5. How should frames be reframed for use in global warming campaigns in Bangkok?

4. Dissertation Outline

This dissertation will consist of seven chapters beginning with this introduction. The first chapter will discuss the background and justification for the research covering both from theoretical perspective and practical dimension. The outline of research objectives and research questions are included to give the general ideas of organizations of this research. The second chapter is a literature review of the global warming discourse, environmental campaigns and framing theory. The chapter will recount previous research collected from both Western and Thai perspectives. The last section in this chapter will consist of a review of framing theory. The first part will discuss general concepts and assumptions while the second part will go into details of framing theory used in communication studies, particularly in the public relations approach.

After reviewing the literature in chapter 2, the details of methodology will be given in chapter 3. There are three methods used in this research: 1) in-depth interview, 2) content analysis and 3) survey. The next chapter will be the report of findings from these methods. First section of chapter 4 is the report of experts' frames. The second part is the report of campaign materials frames. Last section is the report and statistical analysis of target audience members' frames. In chapter 5, the findings will be compared in order to identify the most common and uncommon frames as a part of integrative analysis. Next, the discussion of the findings and analysis will be included in chapter 6. The last chapter will consist of the dissertation conclusion. Limitations of the thesis and suggestion for future research will be offered together with the summary of

the whole thesis and its contribution to the practical field of re-framing global warming campaigns in Thailand.

CHAPTER II

LITERATURE REVIEW

2.1 GLOBAL WARMING DISCOURSE IN WESTERN AND THAI SOCIETIES

Introduction

This section details the foundations underpinning Research Question 1: “What were the private frames about global warming in Thailand?”, and Research Question 3: “What were the global warming frames in the campaign target audience before and after the campaign?” It does so by discussing literature that addresses the way in which Thai society has conceptualized global warming, climate change and also its relationship to nature and natural disasters. There are differences between the way this issue is conceptualized in a Thai Buddhist context (important here because Thai Buddhism influences the administrative and political culture of the Kingdom) and the way western society conceptualizes it. For this reason this chapter begins with a discussion of the western academic discourse on global warming, climate change and the relationship between society and nature. Following this, the literature on the Thai approach to these issues is addressed, drawing on Thai literature (in Thai² as well as English) as well as western literature.

² Thai content is translated into English as transcriptions. Where a word or phrase is translated as a direct quote, the Thai word or phrase is provided in a transliterated form (English characters) in parentheses. The reference follows the western convention of alphabetised surnames in the main list of references. Each Thai reference is numbered in superscript in the main list of references. A second transliterated Thai list of references is provided that follows the Thai conventions, but includes co-relational numerical superscript.

Scientific discourse has played a major role in informing public policy since the demonstrable success of the scientifically spawned Industrial Revolution. It was the Industrial Revolution that gave legitimacy, from the European social perspective, to the 'exploitation' of nature, as opposed to the older model of stewardship among European elites. This is not to say that there have not been other discourses on the stewardship of Nature, particularly among traditional populations (e.g. North American native peoples and Australian Aboriginals) and belief systems (e.g. Buddhism). However, contemporary public discourses hold scientific knowledge in esteem and the passage of the scientific perspective from one that supported exploitation to one that sought conservation of nature is, therefore, an important moment.

In the academic world, especially among English language scholars, there is no single general 'academic English'. Hyland and Bondi (2006) reveal that not only do both spoken and written academic versions of English demonstrate variety across communities, but they also have different discursive conventions and modes of persuasion. In the same vein, when applied to communicating global warming and climate change, there are some differences among various disciplines in terms of conceptualization and word choice.

The following model demonstrates the structure of this chapter. There are two major parts: western experience with global warming, and Thai experience with global warming. Within each section, the different spheres that communicate this topic are discussed based on the previous literatures. The scientific realm is the beginning of the climate change discourse, particularly the physical and social sciences. This leads to the sphere of policy where scientific knowledge is employed as the source of

references. The final sphere is the traditional or philosophical discourse that shapes the way of thinking within each culture. All three spheres are displayed in the public realm where media plays a major role in disseminating the information.

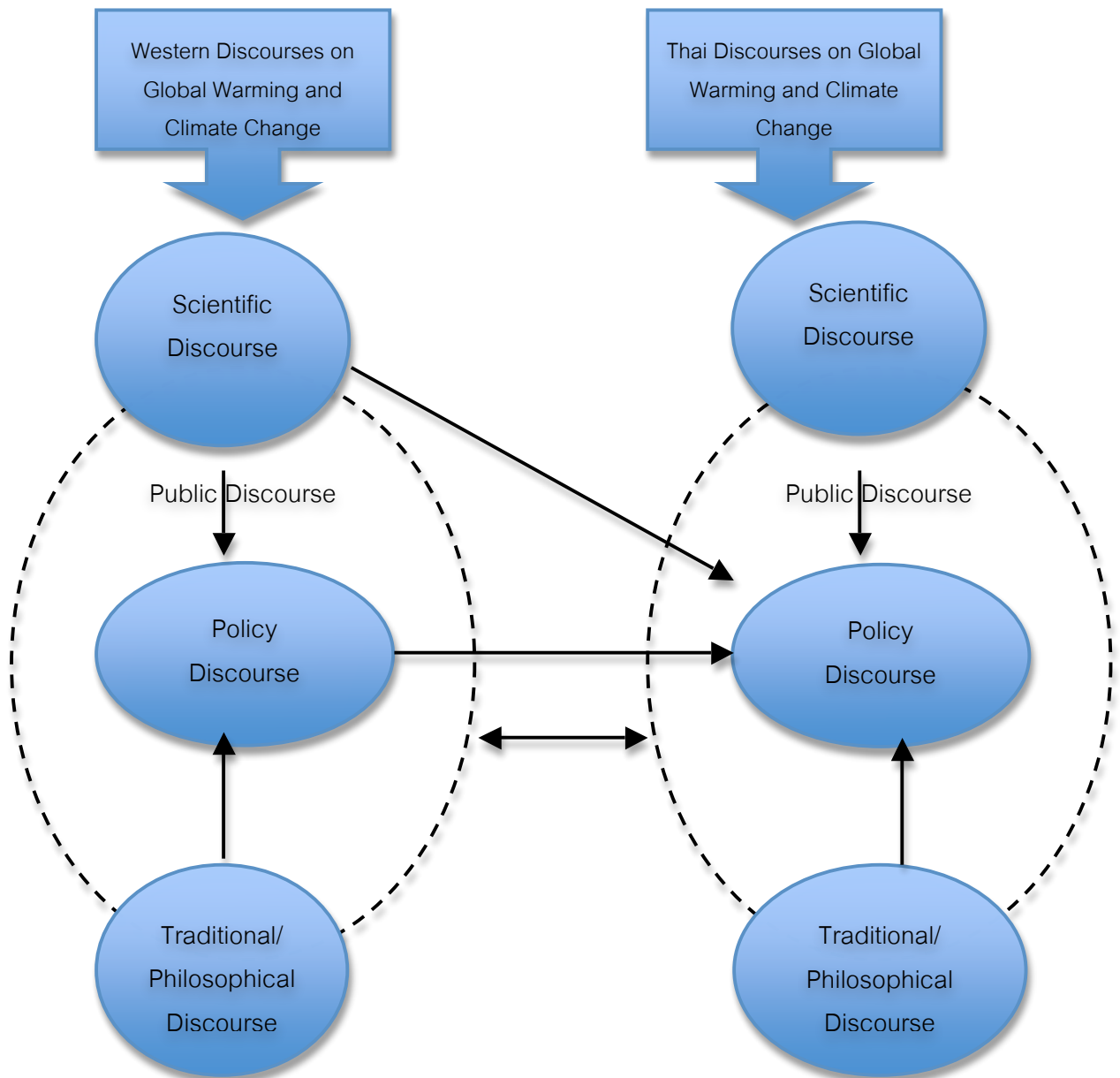


Figure 4 Writing Structure

1. Western Experience

The issue of climate change and global warming has dominated the environmental discourse in the western academic sphere since the beginning of the twentieth first century or roughly a decade after the discovery of the matter (Foresin, 2009). The study of this scientific phenomenon has largely drawn on the contributions of a diversity of fields ranging from global intergovernmental panels to individual thoughts on climate change, global warming and nature. Therefore, this section reviews the literature on scientific discourses including physical and social paradigms to lay out the dominant and oppositional discourses from the developers and the explorers of the issue. The next part addresses the policy community who plan and tackle the problem directly. To understand the roots of western thought towards climate change, traditional and philosophical ideas on the relationship of humankind and nature are discussed. This then leads to the final section regarding the public sphere and climate change issue.

1.1 The Sphere of Science

The western scientific community initiated the discussion of climate change. They first observed this phenomenon and have undertaken scientific investigations relying on the positivist discovery. Western scientists have established several models based on their observations and experiments. However, the science of climate change is more about normative judgments (Schiender, 2010), which is why there is dispute among the scientific community. One group relies on the results of measurement and testing while the other bases its collective normative judgment on the probability of confidence level. Nevertheless, both groups believe in the existence of climate change

but employ different approaches. Both examine climate change objectively. From the second scientific approach, in contrast to the first, humanity plays an important role in climate change both as cause and the remedy. In addition, this problematic issue directly affects social organizations and social processes. The rising notion of anthropogenic climate change has led to studies of social responses as well as social adaptation and mitigation (Hulme, 2005). Different groups of thought have emerged from the social debates. The notion of uncertainty has resulted in a group of sceptics on one hand, while urgency has resulted in a group of alarmists (Leiserowitz, Maibach and Roser-Renouf, 2008). Despite studies continuing to affirm climate change, from both the physical and social scientific communities, the issue is still described as unsolved and unpredictable (Malone, 2003).

1.1.1 Physical Sciences

The global warming phenomena emerged based on scientific discoveries back in the twentieth century when climatology had still not established itself as a separate field of enquiry. It was first detected and defined by physical scientists, and has been referred to with many terms including “carbon dioxide problem”, “energy problem”, “climate change”, and “enhanced greenhouse effect” (Dilling and Moser, 2007). These all sound abstract, benign and utterly uninteresting, at least to most non-climate scientists or non-experts – even to common citizens. In his book on the subject Hulme (2003) dated climate change as beginning with Jean-Baptiste Fourier’s suggestion, made in 1824, that ‘air traps heat, as if under a pane of glass’ and keeps the Earth warm. In 1896, Svante Arrhenius, a Nobel laureate in chemistry, laid a theoretical foundation by describing how fossil-fuel energy use could result in a warming of the

atmosphere. He discovered that the temperature had increased due to the thickness of gas levels covering the earth. Thus, the term 'greenhouse effect' arose, explaining the natural occurrence of heat from the sun not being released from Earth as it is blocked by the atmosphere externally surrounding the planet. During this period, climate change began to be treated as an object of study. The computers at that time allowed researchers to examine the physical and chemical processes by which carbon dioxide and other gases play a role in regulating Earth's climate. However, it is important to note that human beings were not considered part of the equation and investigations until the 1990s.

The term has subsequently helped enable the scientific community to prove and test the phenomenon. Even among scientists, there are opposing sides on how to define climate change. Several approaches have been applied to examine and predict the possibility of the consequences and the effects on Earth. The outcomes of studies have mostly been models of past global temperatures which then anticipate the future.

Scientific research has also attempted to provide a definition of climate change through scientific visuals and technical language. The Intergovernmental Panel on Climate Change (IPCC), formed by various scientific author teams in 1989, has defined climate change as:

“Changes in the atmospheric abundance of greenhouse gases and aerosols, in solar radiation, and in land surface properties alter the energy balance of the climate system. These changes are expressed in terms of radiative forcing, which is used to compare how a range of human and natural factors drive warming or cooling influences on global climate. Since the Third

Assessment Report (TAR), new observations and related modeling of greenhouse gases, solar activity, land surface properties and some aspects of aerosols have led to improvements in the quantitative estimates of radiative forcing IPCC, 2007, p2).

Currently, scientists, or alternatively, the constructionists of the problem (Marlone, 2009), still continue to research climate change on a small to large scale. Even though the topic has been studied for more than a century, no singular conclusion as to what climate change is can be reached among scientific members. While there has been the development of epistemological philosophy, together with that of basic assumptions - including hypothesizing, testing and anticipating - scientists have not come to an agreement up to now.

Confusion as concerns climate change knowledge has also arisen among the scientific community where the discovery paradigm or the belief in one single truth is solid in scientific epistemology and ontology. In his speech on "Global Warming: Motivating Game Changing Actions in an Era of Spin and Confusion", Stephen Schneider, the climatologist from Stanford University, categorized the issue as systematic science rather than falsifiable science.

1.1.2 Social Sciences

From the scientific point of view, the crucial issue is not the importance of the global warming phenomena, but rather it is the focus on the cause or origin of the problems, the consequences and effectiveness of monitoring methods (Jarupongsakul, 2007). Influenced by the scientific paradigm, a sociologist also investigates these topics. Ulrich Beck writes in his book, Risk Society (1992), that science is at once the

cause of the problem, the discoverer of the problem and the likely source of any solution. While it may be science that initiated the discourse, the vibrant conversation continues in various fields.

The contribution of social scientists could be argued to have begun with philologist George Perkins Marsh's work Man and Nature: Or Physical Geography as Modified by Human Action (1864). Marsh recognized the role of human beings in altering nature for their own purposes. About a century afterwards, Rosa and Deitz (1998) summarized the evolution of sociological research regarding climate change issues and discerned two broad types of research. One type sticks closely to data and observations, while the other focuses on human involvement. In the main, social scientists have used system analysis and surveys to conduct research while human beings are still treated as another factor in the scientific discovery paradigm.

In the global realm, there have been many attempts to define global warming as applicable to any nation and to encourage every nation to actively participate. The United Nations Framework Convention on Climate Change (UNFCCC) defines 'Climate Change' as being the result of human activities while 'Climate Variability' refers to the changes caused by other factors. The term 'Anthropogenic Global Warming' is employed to emphasise the change in climate caused by human beings. The global epistemic communities of scientists and policy makers emerge from and continue to work at the national level (Fisher, 2004). Global warming and climate change are the most common and recognized phrases, widely used interchangeably. Some communicators disagree – less on the different meanings and implications but rather as

to which terms may be more effective in reaching various audiences (Dilling and Moser, 2007).

Climate change or anthropogenic climate change are preferred choices in encompassing the many related changes in the atmosphere and global climate – otherwise known as Constructivism of Climate Change (Pettenger, 2007). For instance, the terms allow for the variance of average temperatures in different regions. They also allow room for changes in precipitation, extreme climate events, seasonal patterns, and so on. On the other hand, many in the media, mostly advocates, and other public communicators tend to use the term global warming, which is widely recognised and resonates more than climate change with the public (Shanahan, 2007). Several other terms have recently come into play such as climate disruption and climate crisis (Hulme, 2009). These latter terms, however, have not been tested for audience response. This research paper uses the term global warming to emphasize the term used in the public domain rather than within the scientific community.

Drawn from social scientific studies, the phenomenon can be considered as “the most vivid indexes of unsustainable capitalism” (Branston, 2007, p. 218) as a result of excessive consumption and the impact on the physical-social environment. Also, it is seen as “the century’s biggest story” from the story-telling, narratologist perspective (Smith, 2005, p. 1481). Therefore, it is considered as being related to the economic and cultural lives of citizens. Indeed, the term itself does not only involve the environmental issue but it can also be associated with different dimensions.

Historically, the first organization established to handle the climate change issue was registered in Canada. Following the Montreal Protocol coming into force in 1987,

167 countries around the world implemented national policies that banned the use of ozone depleting chemicals produced in their countries. It is at the national level that global environmental policymaking has its nascence (Fisher, 2004). This level is important because it is where policies are ratified, implemented, and enforced, as well as where the global epistemic communities of scientists and policy makers working on environmental issues emerge and continue to work. The epistemic communities comprise the network of scientists and policymakers around the world and they develop as a product of international environmental regime formation.

There is also a large division between industrialized and developing countries, particularly within the Kyoto Protocol, which controls the carbon emissions of industrialized countries for the five-year period of 2008-2012. However, the larger and longer-term changes have not been addressed within these concrete measures responding to climate change (Dessler and Parson, 2006).

Social Organization and Values: A social science perspective introduces the complexity of global warming by asking what else is going on in the development of human society and how climate change will affect and be affected by these societal changes. Alongside this, the use of technology is also perceived as an important driver in social organizations and values (Rayner and Malone, 1998).

The risk posed by anthropogenic climate change has been with us for quite some time. "Risk society" is a term proposed by Ulrich Beck (2006) with the main proposition being that we live in a "risk society" when fears of everything tend to be amplified into a clamour of overreaction and calls for attempts to reduce risks are at a minimum (Lewis and Boyce, 2009).

Another viewpoint is how climate change overshadows the development of social justice. In fact, it helps to instigate injustice in society. In the global realm, the developing countries claim that those responsible for global warming are the developed nations. They began the industrialized era, the consequences of which now affect all developing and underdeveloped countries. Subsequently, the main argument is whether China, India, and other developing countries have to sacrifice their process of development (Marlone, 2003). Within Asia, the most active nation in terms of a global warming regime is Thailand's largest trading partner, Japan.

Social Processes: The global warming issue is different from other environmental issues as it is full of uncertainties across time and space. The history of this subject matter has been aired by media for more than four decades. The question of social processes serves as a nexus between science, policy and public and political reactions (Smith, 2005). Indeed, it is this particular characteristic that demonstrates that the issue works well with the multi-dimensional nature of public relations work where there is a need to communicate with more than one sector.

Moreover, news editors have become very wary with global warming as viewed as a value-based agenda while it is the obligation for environmental campaigners to actually place the focus on the global warming issue. According to Kasperson and Kasperson's (1991, p. 10) observation, climate change is value threatening and an ideological hazard, as true for news editors as it is for anyone. Thus, editors are careful to avoid a close association between their outputs and a particular philosophical perspective on the world.

Terminology used in Western Societies: The term global warming conveys the idea of the rising temperature of Earth's surface. However, the term 'climate change' is largely used within the western academic community and is preferred by scientists as it can incorporate the various consequential occurrences associated with the issue, namely inundation, heatwaves, snowstorms and abrupt changes of weather in different regions (Hulme, 2009).

Etymologically, the word 'climate' is originally derived from Greek to refer to the differentiation between five zones on the surface of the supposedly spherical world (Hulme, 2009). The list of related vocabulary keeps adding up including climate change, global warming, ozone depletion, extreme change of weather, etc. Global warming is a more popular choice of phrase than climate change and has evoked more concern in Britain (Whitmarsh, 2009). Other terms include global warming and ozone depletion (Hansen, 2007), and global warming and weather (Bostrom and Lashof, 2007). The term global warming, however, has given rise to previous misunderstandings and inappropriate responses towards the issue. It has been primarily associated with temperature, particularly heat, and thus has muddled other aspects of the issue (Carvalho, 2008).

In the USA, for almost two decades, both national polls and in-depth studies of global warming perceptions have shown that people commonly conflate weather and global climate change. A "thickening blanket of carbon dioxide" that "traps heat", the atmosphere or the "heat trapping" metaphors can work better than the "greenhouse effect" in America as shown in the study by Aubrun and Grady (2001). However, even when presented with an appropriate metaphor and analogy, most people still conflate

weather with climate change. Lexical creation in mitigation communication uses compound words to frame the issue such as 'low carbon credit' and 'carbon finance' (Nerlich and Koteyko, 2009). This shows that language has influence on how people will perceive the issue from the word choice, particularly when it is a new issue.

1.3 The Sphere of Policy

There is a major shift in discourse from scientific-based information to relations to human beings when attempts to communicate with mass media occur (Dilling and Moser, 2007). The major concern is what the government and citizens should do to adapt and mitigate the problems of climate change. This particular discourse broadened upon the anthropogenic origins of climate change disputation being reported and widely distributed by IPCC report in 2001. The issue of climate change ignited global collaboration.

The emergence of the Kyoto Protocol and United Nations Framework of Climate Change Convention has had dramatic influence on the global warming issue. Europe and North America dominated the list of published articles on climate change (Kameyama, 2008), which further instigated political debate (Dessler and Parson, 2006) as well as the beginning of climate change policy studies (Feldman, 1994) mostly in developing countries (Marlone, 2009). There has been a recommendation of a no-regrets policy whereby governments have to carefully design policy to assure their capacity to handle the future consequences of global warming (Burton and Marlone, 2005).

1.4 The Public Sphere

Studies of public understanding of climate change have been conducted extensively in Europe and North America. Early studies revealed that people did not really understand the term (Feresin, 2009). This reflects how they define the cause and the possible effects of global warming with an unclear understanding.

More recent studies of public understanding show that people's willingness to act and their understanding do not correlate (Shanahan, 2009). It does not matter if they understand the term correctly; but it is more important for the public to know what it is rather than why it happened. They need to be informed about what they can do and they will be willing to participate. The problem is also considered as being a remote one both in terms of time and distance for the current generation. It is generally perceived as something which mostly affects other parts of the world, and which will have profound effects on future, not current, generations (Nerlich et al., 2010).

Some studies have focused on how people perceive global warming and how they associate the issue with certain symbols or images. Americans as a whole perceive global climate change as one of moderate risk (Leiserowitz, 2007) and are more concerned about global impacts than local effects. The perception toward climate change focuses on danger to geographically and temporally distant people, places, and non-human nature. When it comes to effective images, the American respondents associated the issue with melting glaciers and polar ice or nature as distinct from humanity.

In the United Kingdom, the notion of scientific uncertainty remains the dominant framework in public discussions of climate change (Butler and Pidgeon, 2009) such as scepticism (urgency) vs. alarmism (uncertainty). More studies focus on fear

(Palfreyman, 2006, Wagner, 2008). Negative terms such as those found in doomsaying rhetoric have turned out to be ineffective (DeLuca, 2009). More works on the negative side of climate change highlight catastrophic elements and stories (Branston, 2007). Works that touch on the urgent need for attention on the topic include *Tipping Point* that focuses on how human beings have reached the point where they cannot turn their heads away from this matter by giving examples of climate change consequences (Russil, 2008). Some research has studied the level of urgency associated with climate change problems (Ungar, 2008). At the public level, the media turn to fanciful words (Doyle, 2007). However, this can only capture public attention; it cannot guarantee collective action.

1.4 The Traditional Sphere: The Relationship between Human Beings and Climate

Environmental communication can affect how human beings perceive the natural world and their relationships (Cox, 2006). Thus, communication is a crucial tool in revealing how humans think about things around them which are then eventually reflected in their behaviours in certain environments. To further elaborate, Cox (2006) asserts that the images and information received from the other people around, and media such as films, news and books can influence not only how human beings perceive the environment but also what actions they take.

There are three major schools of thought regarding green citizens. They differ over questions of value, rights and consequences. The first is anthropocentric eco-ethics which asserts that nonhuman nature has no moral standing (and hence no right) other than in relation to how people are affected by changes to it. Eco-centric ethics, by

contrast, holds that nature is the “ultimate source” of value; “some or all natural beings, in the broadest sense, have independent moral status” (Curry, 2006: 64). Intermediate ecological ethics accords intrinsic value to nonhuman nature – not as completely as eco-centrism, but it agrees that moral status can be extended to other sentient beings (Maxwell and Miller, 2008).

The relationship between humans and nature has changed dramatically under modernization (Hanningan, 2006). From the biological perspective, Cox (2006) used the term “membrane of organisms” to identify the interdependent relationship of human beings and the environment. The different discourses have been rooted in three elements as proposed by Aristotle, namely ethos, pathos, and logos and applied to environmental context to reveal the dominant discourse yielded by power and otherness (Chairat Charoensinolan, 2006). The mass media distributes the discourses via different channels. This process provides spaces for meaning negotiation and meaning exchange between individuals and societies. The dynamics of western experiences that create global warming discourse are demonstrated in the figure below:

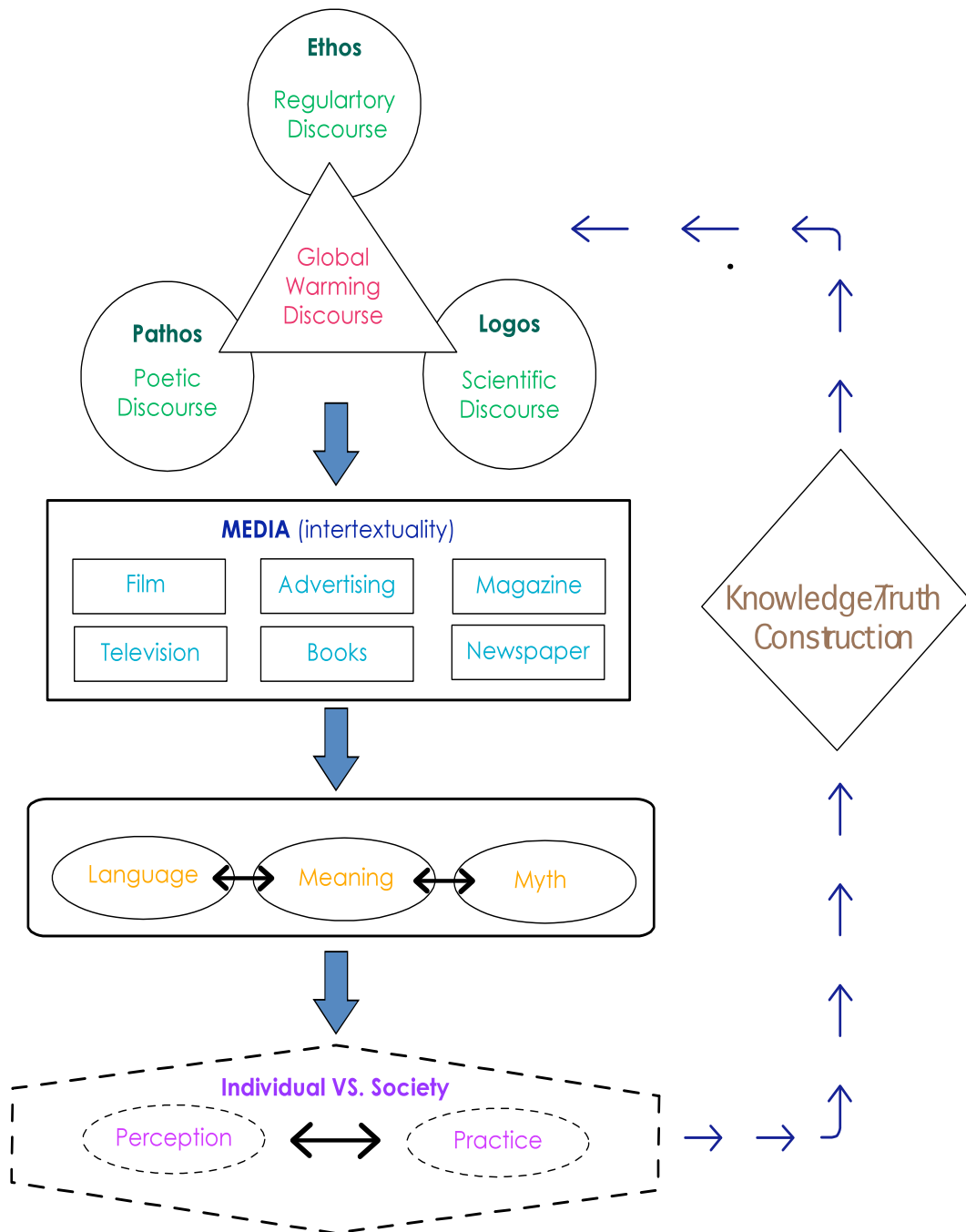


Figure 5 Environmental Discourse and Media from Critical Perspective

2. Thai Experience

The process of globalization has played an important role in the dynamics of global warming talks. The move from international issue to local community is part of the impact of globalization; in the words of Giddens (1990, p64), 'local happenings are

shaped by events occurring many miles away and vice versa'. Global warming, being global in nature (Malone, 2009), becomes an issue that draws attention starting from the international forum and then moving on to the local arena. Thus, the arrow is drawn from Western scientific discourse to Thai scientific discourse to show the latter's influence on Thai science. Western science and policy also have some impacts on Thai environmental policy as several laws are based on Western principles such as Local Agenda 21 or the Plan for Sustainable Development which is based on the Policy of European Environment (Pibansook, 2008). Due to the time and space compression arising from the globalization process (Harvey, 1990), the increasing connection between the public spheres in Western and Thai society is clearly evident.

Due global cooperation such as through instruments such as the United Conference on Environmental and Development and Intergovernmental Panel of Climate Change (IPCC), the global warming issue has become a high priority issue that can no longer be neglected. Thailand was among the countries from around the world that joined the Kyoto Summit in 1997. The Kyoto Protocol is viewed as being a beneficial agreement for the world and at the same time for developed countries attempting to excuse themselves from causing the problem (Dessler and Parson, 2006). Even though the issue has become the talk of the world, the Thai public care more about environmental issues closer to home such as deforestation in rural areas and air and water pollution in urban areas (Kanjana Kaewthep, 1997) than in the global issue. Global warming has been perceived as a problem of developed countries rather than small countries like Thailand where industry is not the main source of revenue. On a smaller scale, the same logic is applied in thinking that the people in urban areas have been

more responsible for global warming than those in the countryside where the carbon emissions are lower. Therefore, this section will review the discourse of global warming in the academic arena and the public realm. The existing concepts of human and nature will be reviewed in order to understand the influence of traditional or philosophical thoughts on political, social and cultural views on global warming.

Thai Academic Discourses on Global Warming and Climate Change: Thailand recognizes its vulnerability to climate change because the country has much at stake. As an agricultural nation, farmers depend on the climate to produce food for both the local and export markets (Environmental Institute, 2005). Therefore, it must play an active role in the world's search for solutions. The country shares with others the challenges posed by the unprecedented climate change. The long coastline (a total of 2,615 km) makes the risk of flooding even more severe (Bangkok Metropolitan Administration, 2009). Thailand ranks sixth among the countries most exposed to coastal flooding and the severity of the projected effects (OECD, 2007). The possibility of inundation from rising sea levels is likely to wipe away certain cities, Bangkok included. This would see the destruction of the country's economic engine and its status as a major hub for tourism. Such flooding would inevitably have adverse impacts on both the social and economic sectors of the capital. Thus, it is important to examine the issue from the scale of the city. However, the problem does not exist only within Bangkok. It is also important to review the ongoing discourse of global warming from the different communities involved with the issues to understand the different Thai perspectives.

2.1 The Sphere of Science

Even though the era of Enlightenment or when science had proved to be major source of truth in Thailand is not as sharply defined as in the Western experience (Chaiyan Chaiporn, 2007), science has been greatly supported and promoted by King Rama V and by his late father King Rama IV during whose reign, it is widely believed, the modernization era of Thailand began to unfold. The study of climate science was officially established in the country with the launching of the South East Asia Regional Centre of START (Global Change System for Analysis, Research and Training) at Chulalongkorn University in 1998.

2.2 The Sphere of Policy

The National Environmental Board (NEB) is the supreme body making the highest decisions concerning the implementation of policies and legally based measures; it is chaired by the prime minister, who often authorizes the deputy prime minister to take charge (Jesdapipat, 2008). There are increasing volumes of seminar reports on climate change and the NEB holds conferences annually to provide space for discussion (National Legislative Assembly Thailand, 2007). Other work has focused on the role of Bangkok and climate change (National Defense College, 2007). Nevertheless, Thai governments, at national and local level, have not been able to pass specific law(s) to establish a process of public participation (Jesdapipat, 2008). It is their main responsibility to set guidelines and encourage public participation in climate change adaptation as well as mitigation.

Even though in international negotiations the local Thai ambassador is generally designated as the head of the delegation, in the case of climate change it is the Office

of Natural Resources and Environmental Policy that nominates officials to handle the substantive negotiations (Jesdapiapt, 2008). Their job is also to promote public campaigns on global environmental protection.

2.3 The Public Sphere

Environmental issues are not a new topic among Thai citizens, but the global warming issue is. Thai newspapers are a major source of information and debate on the global warming issue. Regarding the studies of quantity of global warming articles in Thai newspapers, Jesada Salathong (2009) concluded that it has rapidly increased since 2006 but that there is still a lack of quality news on the subject in terms of information, details and continuation of news disseminated. Journalists should be better trained and informed on the issue to present it more clearly to the public.

Due to the heavy focus on political news, people tend to associate any happenings with politicians or the political process. For example, when it comes to natural disasters in Thailand, people tend to think about it from the political perspective as opposed to from an the environmental one. For example, in 2010, when there was a major flood crisis all over the country, several critiques appeared via the media that blamed it on government policy and actions or lack thereof rather than attribute the problem to nature. Thus, the solutions were targeted at the government including changing the prime minister or focusing on the governmental system rather than tackling the problem through the use of natural science.

2.4 The Traditional and Philosophical Sphere

2.4.1 Buddhism – Balance with Nature: In Thailand, the major traditional influence on citizens' thoughts towards the environment is religion. Buddhism is the

national religion with Theravada Buddhism being the most popular doctrine among Thais. The core teaching is that of harmony and how everything is interrelated as presented in *Paticcasamuppada* or 'on the arising of this, that arises'. This doctrine of causality is applied to reincarnation, where actions in past lives shape future lives and where the resultant progression may be across species. For instance, any life form that we encounter in this life, even a tiny ant, might have been our relative in a previous life. The debit-credit score card for good and bad deeds is known as karma. Hence, a collective karma of life-forms now deceased, not necessarily related to their treatment of the environment, is considered the major reason for any change in nature rather than today's actions of human beings. This is reflected in how green space is holistically perceived and allocated in certain provinces in Thailand (Wayuparb, 2004). People must solemnly promise to take refuge in and accept the Triple Gems – the Buddha, the Dhamma and the Sangha (Bryan Wathabunditkul, 2011). This religion has been infused into Thai culture since the 13th Century. One of the Buddha's core teachings that fits well with the environmental issue is the concept of Buddhist Way of Life which emphasizes the balance and harmony between human beings and nature. Interestingly, Buddhism is also known as the natural religion (Bhikkhu P. A. Payutto, 1993).

Buddhism, in particular, has a special interest in the human condition, but the religion does not see this as the source of problems entirely in the external world. Buddhism sees the source of problems as embedded in the entire process of causes and conditions. For example, for human beings, an improper way of living, be it physically or mentally, can produce negative effects. Moreover, the process is not a one-way cause-effect paradigm. Buddhism identifies the relationships of how things

happen in the world as integrated factors depending on a process of interdependent causal relationships (Paonil and Sringernyuang, 2002). Because of the underpinning Buddhist values, this holistic way of thinking can serve as key to evaluating whether campaigns are well developed for Thai society.

Forest Buddhist monasticism, a practice which is even closer to nature, involves a system of relationships between the individual, society and nature (Phra Paisan Visalo). This school of practice is a good example of how Buddhism shapes the views of human beings towards nature. The way of life is one of living harmoniously with nature according to the core teachings.

Science and religion cannot be examined separately when it comes to environmental research in Thailand. In fact, both work hand in hand with one another to achieve answers. Science attempts to search for answers and provide the instruments while religions, especially Buddhism, seek to understand nature in depth and detail (Bhikkhu P. A. Payutto, 1993). That is to say, they help complement one another.

2.4.2 The Sufficiency Economy – Moderate Consumption and Rationale of Living: The pleasures of consumerism are so endlessly promoted that they are difficult to resist (Lewis and Boyce, 2009). Thus, the sufficiency economy philosophy as proposed by His Majesty King Bhumiphol of Thailand can easily be rejected by the capitalist community, especially in business-driven sectors. From the Western perspective, the idea that economic growth may be finite – that prosperous sections of society may actually have enough material goods and might even be better off seeking “ego-satisfaction” outside material accumulation – is still regarded as unthinkable within

the social mainstream. However, the King proposed this philosophy among Thai citizens in order to encourage sustainable development.

Having observed the negative impacts of a financially-driven economy, the King initiated this philosophy to encourage sustainable development among Thai citizens. In his speech at the Human Development Award presentation to King Bhumiphol in 2007, United Nation Secretariat Kofi Anan said, “As a visionary thinker, Your Majesty has played an invaluable role in shaping the global development dialogue. His Majesty’s “sufficiency economy” philosophy – emphasizing moderation, responsible consumption, and resilience to external shocks – is of great relevance worldwide during these times of rapid globalization. It reinforces the United Nations’ efforts to promote a people-centered and sustainable path of development.” He also added that, “With this Award, we hope to further promote the invaluable experiences and lessons learnt from Your Majesty’s development endeavors and help draw attention to Your Majesty’s visionary thinking beyond the borders of the Kingdom of Thailand.” The sufficiency economy is an attempt to combine the objective and subjective approaches. It is, in fact, a holistic concept focusing on both materials and minds to achieve sustainable development.

The philosophy of sufficiency economy (SE) is a holistic concept of moderation that acknowledges interdependency among people and with nature. It calls for a balanced and sustainable development as its objectives of development (Sathirathai and Piboonsaravut, 2004). In the same vein as Buddhism’s middle path, SE focuses on moderation, reasonableness, and the need of a self-immunity mechanism for sufficient protection from the impacts arising from internal and external changes (NESDB, 1999). Production and consumption should be moderate and reasonable in order to live in

balance with nature in a sustainable way. In other words, a philosophy that guides *the Thai way of living* or behaviour of people at all levels through a middle path (Piboolsravut, 2003a). These have effects on both macro and micro levels of development in Thailand, particularly with the environmental approach. On the environmental front, the principle of self-reliance will force communities to give emphasis to the preservation of natural resources and environment— some of their important assets.

The sufficiency economy has been major in its influence on Thailand's policy direction. It was used as the guiding principle in drafting the current 9th National Economic and Social Development Plan (Krongkaew, 2010). The philosophy has been considered as a cure to the country's financial crisis in 1997. Moreover, it seeks toward strengthening symbiosis and harmony between man and environment as the great force in moving Thailand forward in a globalizing world (Prem Tinsulanonda, 2001).

There are, however, attempts by various segments of the Thai population to dissociate this new economy from mainstream economics. Some of the critiques come from the realm of mainstream economics where the focus is on rationality and efficiency in resource allocation (Krongkaew, 2010). Several comments are made from the group of anti-royalists. Moreover, the pleasures of consumerism are so endlessly promoted that they are difficult to resist (Lewis and Boyce, 2009). Thus, the rejection of the King's philosophy is easily rejected by the capitalist community especially business people.

Both the King's and Buddhist philosophies can have influence on Thai citizens, whether or not Buddhists or royalists per se, because they play an important role in the policymaking process more or less through the individuals who are involved. It is likely

that when asked about the environment, especially global warming, Thai people will link it to these two concepts. Any questionnaire, therefore, should enquire into these assumptions, to probe further and ascertain whether these two concepts are the existing endogenous frames shaping the frame of global warming issue within the country.

2.2 ENVIRONMENTAL CAMPAIGNS

Introduction

This section details the foundations underpinning the research questions on the process of communicating global warming in Thailand, namely Research Question 2: “What were the mediated frames portrayed in the BMA campaign on global warming in Thailand?”, and Research Question 5: “What is the relationship between campaign frames and TAM frames on global warming in Thailand?” This section starts by addressing environmental campaigns through a wide perspective and narrow it down to studies of global warming campaigns. Next, the campaign elements are reviewed to identify the crucial concepts. The review of relevant terms is included such as campaigners, campaign process and campaign evaluation. The last part talks about the development of campaign evaluation methods for global warming campaigns particularly in the Thai context.

1. Environmental Campaigns Elements

1.1 Campaign Definition

According to the Encyclopaedia of Public Relations, a campaign is the strategic design of a series of messages sent to one or more targeted populations for a discrete period of time in response to a positive or negative situation affecting the organization (Heath, 2005). Similarly, Snyder (2003) defines a communication campaign as “an organized communication activity, directed at a particular audience, for a particular period of time, to achieve a particular goal.” Specifically, the term campaign can be used to mean an *environmental advocacy campaign* (italics in source) and Cox (2007)

has defined it as a strategic course of action involving communication undertaken for a specific purpose.

From the communication perspective, Cantrill (1991) has described environmental advocacy generally as a kind of “symbolic discourse (i.e., legal, educational, expository, artistic, public and/or interpersonal communication) aimed at supporting conversation and the preservation of finite resources” (p. 68). Cox (2007) has broadened the term by including the support for both natural and human environments and the well being of the life these environments sustain (p. 244).

As for the environmental campaign, the hierarchical “top-down” models of asking, or telling members of the public what is good or bad for them, and expecting them to comply, are too often ineffective. There is a need for citizen participation in interacting and sharing information. In order to efficiently tackle the problem, citizens should be involved in several procedures including strategizing, making decisions, and implementing programs (O’Keefe and Shepard, 2002). Even if the campaign is vigilantly designed and distributed, it does not necessarily mean that the outcome will be a success. Thus, there is a need to find a campaign that can be both efficient and effective.

The global warming issue is not an easy sell to the public at large due to the broad and distant consequences that may occur. The more vague or diffuse the issue, the lower the consensus among knowledge, attitude, and behaviour scores (O’Keefe and Shepard, 2002). For example, many organizations and private companies are asking citizens to use less plastic bags and more fabric ones. However, this particular

action may not bear fruit in terms of environmental change for years or decades to come. Thus, the effort to change for a better world is discouraged and eventually people turn their attention to another new issue. There is a need to find an effective campaign that both educates and persuades citizens to think, feel and act toward the global warming issue.

Rogers and Story (1987) have identified four features shared by communication campaigns. First, a campaign is purposeful. That is, “specific outcomes are intended to result from the communication efforts of a campaign” (p. 818). A campaign is also aimed at a large audience. A campaign’s purpose usually requires an organized effort that goes beyond the interpersonal efforts of one or a few people to persuade another person or a small number of others. Moreover, a campaign has a more or less specifically defined time limit. A target audience’s response to a campaign – a voter, a change in one’s diet, or the purchase of a smoke detector, for example – will be made after a certain period of time, and the window for any further response will close. Lastly, a campaign involves an organized set of communication activities. The communication activities in a campaign are particularly evident in message production and distribution.

Cox (2007), however, has distinguished the environmental advocacy campaign based on the two particular differences. Firstly, while most issue campaigns are institutionally sponsored to reduce risk or influence individual attitudes or behaviours, environmental advocacy campaigns are usually waged by *non-institutional sources* such as concerned individuals, environmental organizations, or small community action groups. Moreover, most public relations and public health campaigns seek to change *individuals’ attitudes and/or behaviour*. Most environmental advocacy campaigns, on

the other hand, seek to change either certain *external conditions*, or *the policy or practice of a governmental or corporate body* (p. 251). Yet this may not always be the case in Thailand, where people do not have as strong a consciousness towards environmental issues as they do towards economic issues. Where can I find money is more important than what is the cause of pollution.

A campaign may rely on multiple forms of advocacy (Cox 2007). In designing an advocacy campaign, there are the three fundamental questions of objectives, audiences, and strategies (p. 254).

1.2.Campaigners

The campaign team is also another crucial component of campaign making. Seldom is a campaign created, much less implemented, by a single individual. Instead, there are usually two or more professionals who comprise the public relations campaign team, and the result of their collective work almost always translates into a superior effort. Directing most public relations efforts is a campaign manager or project leader, who is responsible for everybody as well as everything that transpires during the campaign. In the larger team format, specialization is typical. There may be a campaign leader with several program or function coordinators who are responsible for such areas as news materials, media relations, special event planning, and employee relations. On the other hand, in smaller companies or agencies, one or more individuals will normally handle all of these responsibilities. Therefore, in order to understand the rationale behind the campaign, there is a need to know the campaign team as well as the goals and objectives.

Moreover, those who take part in developing a campaign can be stakeholders or sometimes identified as “the community” (Spicer, 2007). This refers to those who receive direct effect from the certain issue leading to developing a campaign. In Freeman’s (1984) Strategic Management: A Stakeholder Approach, a stakeholder is defined as “any group or individual who can affect or is affected by the achievement of the firm’s objectives” (p. 25). However, the word ‘affect’ becomes problematic. As Donaldson and Preston (1995) write, “[i]t is essential to draw a clear distinction between influencers and stakeholders: ... some recognizable stakeholders have no influence, and some influencers have no stakes” (p. 86). Adding the degree of influence, Combs (1998) categorized stakeholders into primary – “those who can harm or benefit the organization” – and secondary– “those who can affect or be affected by the actions of an organization” (p. 292), but not to the same critical degree as the primary.

From the corporate responsibility communication view, stakeholders can be broadly defined as the main groups interested in the organization including stakeholders/owners, customers, suppliers, employees, competitors, civil society (NGOs and pressure groups), communities, governments and regulators. The major influential stakeholder in corporate responsibility matters is the owner who can set the value level of the issue for the organization (Jeune, 2005). In other words, all stakeholders are not equally important despite the different issues at stake.

Based on American environmental movements, environmental groups can be divided into four main types based on their approaches to issues (Heath, 2005). The first category is Radical type that wants the wildest possible dissemination of their position and message, and is willing to go to great lengths to achieve that goal, such as Earth

First! and Greenpeace. Another group is the Mainstream Activist type including such organisations as the Sierra Club and the National Wildlife Federation. They are more centrist compared to radical groups. Although they have well-defined political agendas, they approach these issues through professional lobbyist and grassroots organized by using media and political pressure and influence tactics. The third is Quiet Workers type that maintains a relatively low profile while working to achieve their goals. Lastly, there are the Local Community groups. These form around issues of specific concern in the immediate locality of members. These different groups address a diversity of issues and often differ significantly in their modes of advocacy (Cox, 2007).

Former New York Times writer Philip Shabecoff (2000) argues that the chief role of environmental groups is to act as “intermediaries between science and the public, the media, and lawmakers” (p.152). They can be considered as liaisons in the environmental networks. *Campaign Target Publics or Target Audience Members*: Public demand is an active demonstration of support for the campaign’s objective by key constituency groups, such as families with small children, voters in a key swing district, persons with respiratory problems, commuters, or members of a sports club (Cox, 2007). Towards a sole environmental goal, there may be several environmental groups or communities. In fact, other voices and constituencies may be competing for the same support (p. 255). The campaign for using fabric bags, for instance, has widely been employed by governmental agencies, business entrepreneurs and NGOs while they all target the same public.

Public support or opposition to climate policies (e.g. treaties, regulations, taxes, subsidies) is greatly influenced by public perceptions of the risks and dangers of

climate change. Thus, public risk perceptions can fundamentally compel and constrain political, economic, and social action to address particular risk (Leiseriwits, 2007).

Research has shown that even if participants have high levels of knowledge about the problem and the community has invested in changing the attitudes through advertising or educational campaigns, behaviour is often unaltered (McKensir-Mohr, 2000). Barriers to action can be internal or external to an individual. For example, internally, some people lack knowledge about how to implement a specific act or externally, some infrastructures are not properly endowed to facilitate practice.

According to the several environmental cases studied by Cox (2007), campaigns often distinguish between three types of public audiences: (1) the base or the core supporters, (2) the opponents, and (3) persuadables or members of the public who are undecided but potentially sympathetic to a campaign's objectives (p. 257). Some other scholars add opinion leaders, those whose statements often are influential with the media and members of the primary audience.

O'Keefe and Shepard (2002) suggested that the most effective campaign would focus on multiple personal information including audience needs and communication preferences. The strategic targeting of differentiated programs and messages to audience segments should be undertaken. In other words, the segmenting of audiences and message differentiation elements should be based on demographic, psychographic and behavioural profiles. Human thought, feelings, actions, and expressions are often skewed due to the latent prejudice, preconceptions, predefined personal identity, or object production (Deetz, 1992).

Moreover, the target publics' motivation is crucial when it comes to effective persuasiveness. In the attempt to change the behaviour of the audience, whether the focus is beliefs, values, trust, emotions or economic, communicators must know what matters to the audience, not what should matter to them (Reardon, 1991). Professionals should directly assess the motivations of the target population for the particular actions in mind. The motivators, however, might be offensive in some circumstances, or worse in others.

Based on the environmental advocacy campaign view, Cox (2007) has divided the audiences into two categories. The primary audience consists of decision makers who have the authority to act or implement the objectives of a campaign. The secondary ones (also called public audiences) are the various segments of the public, opinion leaders, and the media whose support is useful in holding decision makers accountable for the campaign's objectives (p. 256). There is also a tendency of stronger media messages to have effects on the primary audience rather than the latter. According to the Trumbo longitudinal study (Trumbo, 1995), the effects of the media coverage of global warming occurred not with the public but with members of Congress. It can be concluded from the research that creating policy apparently serves as a catalyst for media stories, which in turn seem to galvanize Congress to further action, which produces more media coverage, and so on. Moreover, the most attentive audiences for mass media messages are policy-makers and elites. It appears that these individuals turn to the mass media as a way of keeping track of public opinion as well as to monitor the activities of other elites (Price, 1992). This assumption can be helpful in categorizing the types of audiences and their expectation as well as their patterns of media use.

There are two major parts in campaign process. One is campaign planning and another is campaign programming. The first one is the thinking process or the stage where the campaigners analyse the situation, strategize and plan out the campaigns. The latter is the part where they execute the plan. This can include the different section of public relations including media relations, community relations and government relations. Both stages are conducted to communicate to the publics.

1.3 Campaign Planning

There is some disagreement as to the meaning of the terms “goal” and “objective” (Matera & Artigue, 2000). From their perspective, it is suggested that the goals are eminent and the objectives are secondary and play an assistance role. A goal should also produce a measurable result within a given period of time. Thus, there are five useful questions to as concerns goals (Ruddell, 2000):

1. Do they clearly describe the end result expected?
2. Are they understandable to everyone in the organization?
3. Do they list a firm completion date?
4. Are they realistic, attainable, and measurable?
5. Are they consistent with the management's objectives?

According to Cutlip, Center, and Broom (1994), “objectives spell out the key results that must be achieved with each public to reach the program goal.” In practice, they create focus, provide guidance and motivation, and specify outcome criteria. Objectives, if they are clear and in writing, can keep the team and their program on track. The objectives are most useful if following a suggested pattern. For example,

sentences should begin with “to” followed by a verb to describe the direction of the intended outcome. A specific outcome should be noted as well as the magnitude of change or level to be maintained in measurable terms. Lastly, a target date should be included for when the outcome can be achieved.

Management by objectives (MBO), a mainstay in most organizations, can provide public relations professionals with a powerful source of feedback. Introduced by Peter Drucker in 1954, MBO can tie public relations results to the management's predetermined objectives. Despite the difference in program implementation, most programs share these notes:

- specification of the organization's goals with objective measures of the organization's performance;
- conferences between a superior and a subordinate to agree on achievable goals;
- agreement between the superior and the subordinate on objectives consistent with the organizations' goals;
- periodic reviews by the superior and the subordinate to assess progress toward achieving the goals.

To conclude, according to Seitel (2001) “the key is to tie public relations goals to the goals of the organization and then to manage progress toward achieving those goals. The goals themselves should be clearly defined and specific, practical and attainable, and measurable.” Therefore, the team and goals plus the objectives of a global warming campaign must be precise and concise enough to effectively create the program.

In the context of the environmental advocacy campaign, Cox (2007) has defined strategy as a specific plan to bring about a desired outcome; it is the identification of the specific steps or means to an end (p. 258). Strategic implementation includes educational and persuasive messages, spokespeople, and events to mobilize a group's base of support as well as opinion leaders and media, to influence the primary audience to act on the group's objective.

Journalist William Greider (2003) examined the shift in strategy used in campaigning. It turned out that traditional "buy green" campaigns that rely on individual consumer purchases have had an exceedingly modest effect on corporate practices.

Leiserowitz (2007), from Decision Research, based on a review of Americans' risk perceptions of global warming, has proposed education and communication strategies including: 1) to highlight potential local and regional climate change impacts, 2) to note that climate change is happening now, 3) to highlight the potential impacts of climate change on human health and extreme weather events, 4) to talk openly about remaining uncertainties and 5) to tailor messages and messengers for particular interpretive communities.

1.4 Campaign Programming

Another aspect of the campaign is the use of channels. The selection of media used by campaign designers are based on political or economic reasons. Television has the capacity to reach millions of viewers, so public service announcements usually turn out to be a good choice. The local newspaper will also be a good outlet to reach science and environmental decision-makers as it is preferred for those campaigns

seeking to influence a small subset of the population. For example, The New York Times or The Washington Post is particularly good for reaching those scientifically literate and actively seeking science information (Miller, 1998).

Another strategy used to convince the target population of the campaign is to create an emerging norm. This can help to motivate behaviour change by tapping into our desire to conform by convincingly representing certain action as something that “everyone” does, or at least people the audience respect – also known as opinion leaders – such as celebrities (Cialdini, 2001). This strategy is based on the classical psychological theory of Ajzen (1991) who posited that behavioural intentions are due in part to subjective norms (e.g. beliefs about what others close to the subject think s/he should do). For example, research participants recycled more frequently and in greater amounts when they were given feedback with either injunctive social norms (what others think should be done) or descriptive social norms (what other people are doing) (Bator and Cialdini, 2000). The communications can help increase adoption via different channels such as daily life conversation, mass media coverage, or communication from trusted sources. This strategy can be applied when the campaign designers know exactly who are the target population’s opinion leaders. This strategy uses pressure from the people around the target audience to act as motivation to comply with the campaign’s objective. In order to put the framing analysis into practice, the research needs to study environmental campaigns to understand the pragmatics of environmentalism.

Another study to guide the strategy of media selection was a survey conducted in Milwaukee to explore the predictors of channel use about an environmental risk

(Griffin, Dunwoody, and Dybro, 2000). The city tried to communicate with the residents about the problem of lead contaminants in drinking water by placing a brochure in their next water bills. The brochure, a mediated channel, identified the problem and offered a number of risk-reducing behaviours. When the researchers sought linkages between channel use and behaviour change, they found, predictably, that exposure to the brochure had virtually no effect. Most of the residents had no memory of even receiving the brochure. In fact, what did predict adopting safer behaviours was a visit, to the home, by a public health official. In sum, it is obvious that an interpersonal channel is an effective alternative for communicating risk.

While mediated channels such as television and newspapers may reach millions and provide a cost-effective source of information about global climate change, they may not persuade individuals that such changes will have an impact on them personally or that they can do something personally about the problem. To have an influence on someone's personal beliefs and behaviours may require an array of information channels. Specifically, the gold standard for behaviour change remains interpersonal communication. Thus, if the campaign objective is to change someone's behaviour in ways that are novel and at least initially inconvenient, the best advice is "talk to him" (Dunwoody, 2007).

Campaign Messages: With the campaign team in place and the goal clearly stated, it then becomes time to develop the campaign programs, including message strategies intended for the various audience segments. As developed by many environmental groups, Cox (2007) concluded that a message is usually a phrase or sentence that concisely expresses a campaign's objective and the values at stake in the

decision of the primary audiences. Despite the considerable information and arguments elaborated by campaigns, the message itself is usually short, compelling, and memorable and accompanies all of a campaign's communication materials (p. 263).

It is almost impossible to control how the media will characterize a topic, no matter what is said about that particular subject in the neatly prepared media kit. However, there are numerous opportunities with collateral materials in which a campaign manager is in a position to control the message content, if prepared to do so. The important notes to remember is to know what to say, how to say it, and when to say it. The context can also play an important role in the message process. Moreover, the other factor that greatly affects the effectiveness of one's campaign messages is continuity between message and medium. Simmons (1990) states that "the different messages in a communication campaign should be recognized as part of the same effort, whether the format is print, radio, television, brochures, or direct mail. A 'building' effect, which improves memory and learning, is accomplished through message continuity devices." The idea of these message continuity devices has led to an integrated communication campaign which has recently become more popular.

1.5 Campaign Evaluation

If measurable objectives were set at the beginning of the planning process, then there is a means for measuring the effectiveness of the campaign. Evaluation is measuring the consequences of the campaign in terms of whether they are considered a success or a failure. More complex definitions include assessing the overall

effectiveness of the campaign. To evaluate realistically, the measures of effectiveness must be objective, systematic and empirical (Parkinson & Ekachai, 2006).

Public relations campaigns with the greatest integrity always begin and end with research. Early research helps to determine the current situation, prevalent attitudes, and difficulties that the program is up against. Later research examines the program's success, along with what else still needs to be done. Research at both points in the process is critical. Therefore, Seitel (1992) states that research should be applied in public relations work both at the initial stage, prior to planning a campaign, and at the final stage to evaluate a program's effectiveness.

Campaign Effects: In order to understand the effect of a campaign, there is a need to examine the stages of information processing offered by Wyer, Jr. (2008). This processing of information for the purpose of making a judgment or decision can occur in several stages. For example:

1. Attention – people pay differing amounts of attention to the various aspects of the information received.
2. Encoding and comprehension – people interpret individual pieces of information in terms of previously formed concepts that they exemplify, and may organize clusters of features with reference to a more general knowledge structure of “schema”.
3. Inference – people often infer the likelihood that a statement or assertion is true, or the frequency with which a particular event has occurred. At the same time, they estimate the likelihood that an event will occur in the future, or that a certain state of affairs did or does exist. They sometimes infer that

an object has a particular attribute, or might evaluate it as either favourable or unfavourable. In other cases, they make a comparative judgment of several objects or events along a given dimension, or might compute a preference for one alternative over another.

4. Response processes – people transform the implications of their subjective judgment into an overt response or behavioural decision.

The processing at each of these states commonly requires the activation and use of previously acquired concepts and knowledge. Thus, it may depend in part on which of the several potentially relevant subsets of this knowledge happens to be most accessible.

Any campaign can provide knowledge since it can be also considered as informative. Therefore, the first consequence of a campaign can be in terms of knowledge. From the psychological aspect, people's judgments and decisions are typically based on only a small subset of the knowledge they could potentially apply. Moreover, when they receive new judgment-relevant information, they construe its implications without considering all of the alternative interpretations it might have. The concepts and knowledge they employ in each case are not necessarily either the most relevant or the most reliable, but rather, are the cognitions that come most easily to mind (Wyer, Jr. 2008).

There are two general types of knowledge that come into play at these stages of processing. Declarative knowledge concerns the referents of everyday life experiences (persons, objects, events, attitudes and values, oneself, etc.). It can consist of general semantic concepts or categories. Alternatively, it could comprise a configuration of

features that are organized temporally, spatially or causally. They are stored in memory and later retrieved as a unit. These knowledge representations could pertain to a specific person or experience or a more general characterization that applies to several individuals or events. On the contrary, procedural knowledge refers to the sequence of actions that one performs in pursuit of a particular goal such as driving a car, using a word processor. Whereas declarative knowledge is reflected in the information we can recall about an entity or that we implicitly draw upon in the course of attaining a particular objective, procedural knowledge is reflected in the sequence of cognitive or motor acts that are performed in the pursuit of this objective. The influence of both types of knowledge is apparent at all of stages of processing. Many effects that are attributed to the accessibility of declarative knowledge could be due to the accessibility of procedural knowledge instead.

It is apparent from psychological research that the knowledge we acquire can elicit subjective reactions such as positive or negative effects as well as can be a major source of information people use as a basis for judgments and decisions (Schwarz&Clore, 1996; Stack&Deutsh, 2004). They can also influence the interpretation of information (Adaval, 2003) and the weight that people attach to it when making a judgment (Adaval, 2001). Its influence can nevertheless be conceptualized in terms very similar to those of other aspects of knowledge that people have access to at the time they receive information and make a judgment or decision.

Wyer (2008) provides the basic principles of knowledge accessibility: One salutary effect of communicating about global climate change is that the individuals attending to the messages will likely learn something. Actually, the tendency of media to

treat global warming as contested terrain may actually enhance learning. Scholars find evidence that controversy increases the salience of issues and prompts individuals to pay closer attention to messages (Tichenor, Donahue, and Olien, 1980). That is to say, this can lead to greater knowledge about the particular issue in question. Controversy can turn audience members into systematic information processors. In other words, the recipients can at least gain certain pieces of information albeit for a short period of time.

Several studies related to climate change (Bostrom et al., 1994; Read et al., 1994; Kempton, 1997) stress the importance of knowing the prevailing attitudes and values of the audience. As Kempton (1997: 20) put it, “anyone trying to communicate with the public about global environmental change has to address pre-existing cultural models and concepts and not simply assume that he or she is writing on a blank slate.” Presenting scientists’ causal models of climate change is not likely to encourage energy conservation as audiences have strong countervailing values or attitudes on the issue.

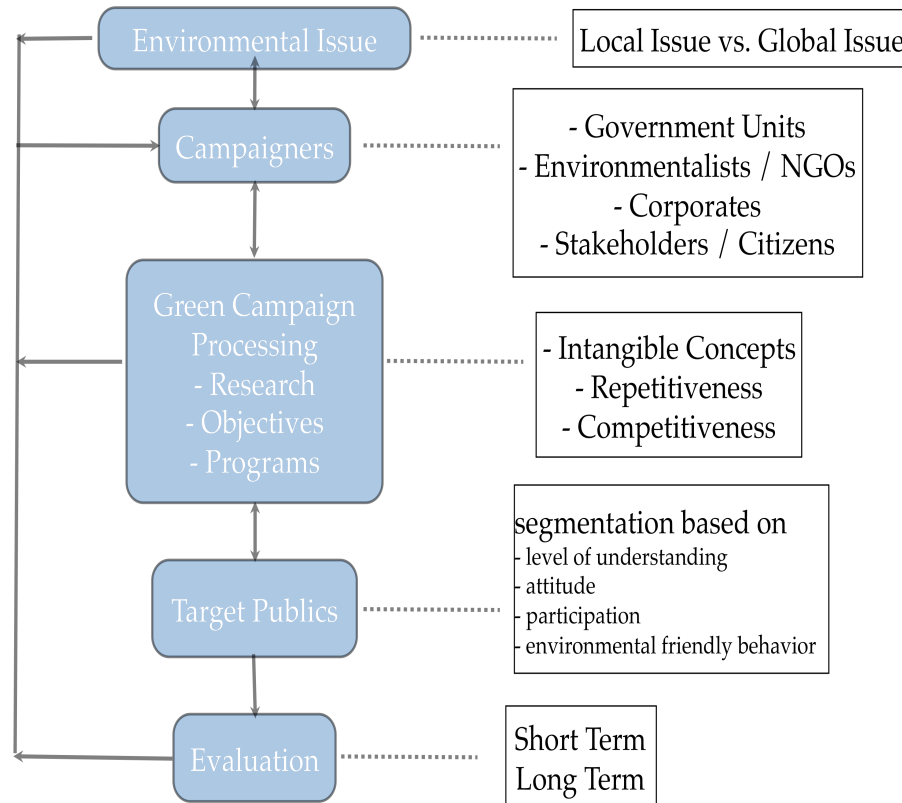
Among the most difficult communication challenges is persuading people to act on a problem such as climate change, which is not immediately relevant or easily solved. The challenge becomes even more difficult when you ask people to change routine behaviour. In the field of communication, not surprisingly, many scholars probably come to believe that the change of behaviour is a result of the information that changes attitudes (Chess & Johnson, 2007). Many informational efforts to promote environmentally responsible behaviour lean on an implicit theory of behaviour (Costanzo et al., 1986) that “right” behaviour naturally follows from “right” thinking. However, social science theory and much empirical research show that links between knowledge and behaviour can be tenuous at best. Information is not entirely inconsequential, but it is

much overrated as a change agent (Sturgis and Allum, 2004). Research is essential to determine what target populations perceive as barriers to specific behaviours. Some barriers are tied to the specific behaviour. For example, obstacles to a suburbanites' car-pooling are different than those that impede conserving energy at home (McKenzie-Mohr, 2000). Probably, the best way to motivate behaviour is through applying knowledge of the audience's beliefs and values.

Campaigns have become prominent in the late 1990s as sources of media coverage. This is when certain groups such as politicians, business people, and non-profit workers see their interests as being potentially threatened by climate change coverage and are able to control the terms of the media (Howard-Williams, 2007). This is drawn from the previous work of Trumbo (1996) who argues that "changes occurring in the life-course of this issue apparently involved shifts linked to who was getting their message into the media rather than how the media was choosing to present the information" (p. 281). It is apparent that, campaigns can play an important role in shaping media coverage as well as controlling the message presented in the media.

The media works as the medium of the message. Yet journalists rely on different sources to gain their data for presenting the news. For climate change, most media discourse on the issue was "taken over by politicians and other actors" (Carvalho, 2007). Thus, the media can no longer hold on to this legitimate right of 'gatekeepers'. They become only the medium for the message. These other sources are the critical message builders. Below is the summary of environmental campaigns and relevant concepts that make environmental campaigns different from other types.

Figure 6 Environmental Campaign Elements



2. Green Campaign Evaluation: Global Warming Campaigns in Thailand

Campaign evaluation can take place at any stage of the process. In the beginning, campaigners have to evaluate the situation as a part of the research phase in the ROPE process proposed by Hendrix and Hayes (2010). In the final stage, evaluation is to measure the consequences of the campaign, such as to identify its success or failure, and should be carried out as an ongoing process to yield a long-term evaluation. More complex definitions include assessing the overall effectiveness of the campaign – defined as front end and back end evaluation (Coffman, 2003). Other academics also argue that even though the campaign is vigilantly designed and distributed, it does not necessarily bring about a successful outcome. Thus, there is a

need to find a campaign that can serve both efficiency and effectiveness (O'Keefe and Shepard, 2002). Both efficiency and effectiveness have to be measured in accordance with the initiated objectives. Some campaigns may achieve effectiveness but not efficiency, or vice versa. The evaluation methods can be the tools to identify and cover any areas of which the campaigners, sponsors or even the policy makers need to see feedback. Moreover, in different cultural contexts, the indicators of success should also include appropriateness, which can be identified by the cultural values embedded in the society.

2.1 Evaluation Methods

There are three major levels of campaign evaluation (Coffman, 2002). Each level measures different aspects of the campaign. Process evaluation is the attempt to measure the efforts in designing the message as well as distributing and disseminating the message. On the contrary, the outcome evaluation tries to measure the effect of the campaign including the changes in the basic components of the target public such as knowledge, attitude and behaviour. Coffman (2003) has reviewed the change theory to lay out other elements ranging from behavioural change to policy change. For example, in the process evaluation or the measure of effort used in designing the message and selection of channels, campaigners can employ media tracking and case studies. The outcome evaluation mostly uses direct response tracking, framing analysis, and rolling sample survey while the experimental method is used for impact evaluation. Applying the discussed concepts, the methods used in green campaigns can be based on what type of campaigns are created. It should also be noted that to produce a realistic evaluation result, the measure of effectiveness must be objective, systematic, and

empirical (Parkinson and Ekachai, 2006). Even though both qualitative and quantitative methods are used in campaign evaluation, the latter seems to be more common, particularly in Thailand.

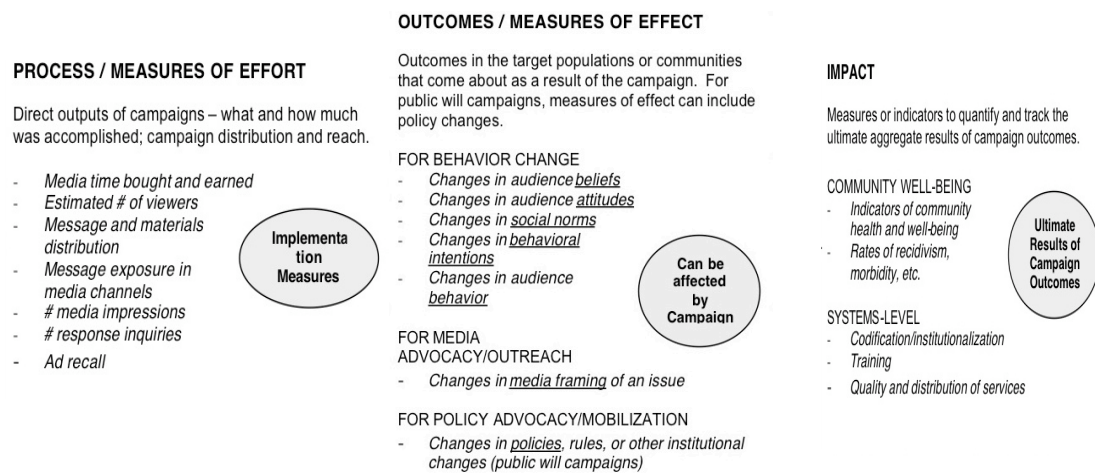


Figure 7: The Public Campaign Evaluation Level

The studies of campaign evaluation in Thai academia are numerous due to the wide range of campaigns developed by different sectors, but they are not productive. Most of the works still focus on traditional campaign project evaluation without seeking to develop and improve evaluation methods. From the public relations perspective, applying the four communication models of public relations proposed by Grunig (1992) to investigate the practice of Thai public relations, Rungnapar Pitpreecha (2010) found that the symmetrical and asymmetrical two-way communication models are mostly employed by public relations practitioners, particularly within private organizations. This demonstrates that the target's feedback is important in developing public relations works. Moreover, in terms of evaluation, research is mostly conducted at the end of the projects, events, or certain activities within a major campaign. Another study of note

focuses on the dimensions of evaluation. Phnom Kleechaya (1999) categorized the indicators for public relations performance evaluation into five major dimensions: work, efficiency, affection of target group, behaviours of target groups, and benefits of organizations. The dialogic process of communication is as important as the indicators to measure the success and failure of a campaign. It is not sufficient to look at either the process or the elements separately.

Studies on evaluation have also been carried out in different campaign fields such as health communication and political communication. Studying the AIDS campaign, Kanaphan (2008) compared the effectiveness of television advertisements of those created by governmental units and those by private organizations, and in the process developed a scale of evaluation. There is also a study of campaign feedback by the Ministry of Education (2009) to measure the distribution of knowledge in educational institutions in Thailand. Even though there are many works that focus on campaign evaluation, there is still a lack of unity and cohesive direction of how to evaluate a campaign particularly within the Thai context. From both Western and Thai evaluation research, the methods applied are mostly quantitative approaches. This shows the influence of the positivist paradigm in the evaluation concept. The lack of qualitative approach may produce a result that overshadows some invisible factors or complexity within the target audience, who are a crucial dimension of two-way symmetrical public relations communication. Therefore, the next section will discuss the use of both methodological approaches to evaluate a campaign from different angles in the attempt to enhance both the breadth and depth of assessment.

Types	Definition/Purposes	Outcomes/Measures	Potential Questions for GW Campaigns
Formative	Assesses the strengths and weaknesses of campaign materials and strategies before or during the campaign's implementation	Strategy and creative design phase (e.g. presenters, themes) Marketing research	- What messages (e.g. apocalypse, household responsibility) work with what audiences (e.g. alarmed, sceptic)?
Process	Measure effort and the direct outputs of campaign	Distribution Placement Exposure	- How many materials (e.g. brochure, TVC, news release) have been put out?
Outcome	Measures effect and changes that result from the campaign	Knowledge/Awareness Saliency Attitudes Norms Self-Efficacy Behavioural Intentions Behaviour Skills Environmental Constraints Media Frames Policy Change	-Has there been any affective change (e.g. people are aware of GW, GW becomes part of the national agenda)? -Has there been any behaviour change (e.g. people reduce consumption)?

Impact	Measures community-level change or longer-term results that are achieved as a result of the campaign's aggregate effects on individuals' behaviour and the behaviour's sustainability	Long-term Outcomes of Behaviours Systems-Level Outcomes	- Has there been any systems-level change (e.g. low carbon city)?
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Table 1 Global Warming Campaign Evaluation

2.2 Global Warming Campaign Evaluation

One major difference between the news and campaigns is in their respective roles towards the public. What news media does is to report what happened while campaigns tell the public what to do. Thus, the positions of campaigners can become subjective and more goal-oriented than journalists. This is a special function of campaigns in social change especially in citizens' behaviour changes.

With the advances in media technology, campaigns have much more options in reaching diverse groups of the public. There are several campaigns that have been initiated and distributed online. For example, 350.org is an organization aimed at raising awareness of climate change. Another successful virtual campaign is Earth House by WWF where people from around the world can participate via its website as well as social networking programs such as Facebook and Twitter.

Dunwoody (2007) offers 'roadblocks' (barriers) for the global warming campaigner to be aware of in effectively using the mass media for social change:

1. Existing beliefs will have a stronger impact on the campaigners' message than vice versa. Beliefs are cobbled together from what people know and how people feel about things. Sometimes that cognitive/affective combination is not intensely maintained making people amenable to change. On the contrary, if the belief is robust – the outcome of years of pondering, personal experiences, conversations with others, habitual behaviours – then messages that collide with that belief may bounce helplessly off the target group. The imperviousness of strong beliefs makes them difficult to influence. It is suggested that campaigners need to understand the belief structures of their audiences well enough to turn to audience subsets whose beliefs are either already somewhat consonant with the message or are pliable enough to make change possible.
2. The strongest message effects may be unintended ones. In other words, a campaign may indeed have an effect, even on the intended audience, but it may not be the effect intended by the campaigners. Thus, when a campaign fails to change most individuals' behaviour, it does not necessarily define the effort as failure or a "minimal effect".
3. All information channels are not created equal. Channels are the carriers of information dissemination. They can range from human beings (interpersonal channels) to a wide range of mass media, including magazines, radio, television, newspapers, and the World Wide Web. Many campaign designers select channels for political or economic reasons. What can be missed from all these

calculations is that lay individuals seem to employ different communication channels to achieve different purposes. In other words, this is not a one-channel-fits-all world. For example, one would expect that media coverage of global warming might lead a person to a greater awareness of the prospects of such warming for Earth and for other people. This, however, may not influence the individual's sense of possible impact from their actions. A viewer would remain strikingly independent of the causal patterns, becoming a kind of free agent whose deeds are considered as impact-neutral.

4. When it comes to messages that convey negative information or that ask the recipient to make an effort to change their behaviour, the distinction between "us" and "them" occurs and then greatly restricts the array of channels that the campaigners assume to be interpreted as being "about us." Actually, in many communication studies, the channels that fall into the "us" side of the equation sum are just one: interpersonal. The best information predictor of behaviour change is not seeing a public service announcement on television but talking to someone.
5. Experiences matter more than data. Scientists learn to privilege evidence and to employ data when trying to be persuasive. On the other hand, psychologists have been demonstrating for years that personal experiences trump data almost every time (see, e.g. Gilovich, 1991; Zillmann and Brosius, 2000). It appeared that a vivid, concrete experience is more easily recalled and seems to carry more weight than pallid data with no discernible personality. Both vividness and concreteness can also help or hurt the cause. The power of the anecdote does

suggest that campaigners need to build appropriate, concrete examples into their campaigns to have an effect. The operational definition of “appropriate” here would be anecdotes that are consistent with the best available scientific evidence. An example can be drawn from the campaign strategy released after a major report on the effect of global warming on the Arctic in late fall 2004 (ACIA, 2004). A variety of graphics and photographs were used to accompany stories about the report. The extensive media coverage that followed took full advantage of the vivid images in hope of enhancing the impact of the stories on readers and viewers.

6. Audiences who specialize in “fast and frugal” information processing are poor targets for complex science explanations. In order to seek understanding of certain information, instead of deliberately thinking about and contemplating it, people tend to rely on heuristic aids such as expertise, redundancy, and our existing knowledge of an issue, however incomplete (Kahlor, Dunwoody, and Griffin, 2004). The heuristic predisposition of climate change audiences can work for or against a campaign maker. In Rogers’ study (1999) of individuals’ reactions to newspaper stories about climate change that contained contrasting perspectives, it was found that rather than concluding that one of the experts may be more “right” than the others, the respondents deemed them all to have legitimate claims to truth. Thus, it is concluded that “no one knows what’s true” about climate change. One way to cope with this human tendency to default to heuristic information processing is to abandon heuristic seekers and processors and to concentrate, instead, on communicating with policy-makers and other

information elites, who are more likely to process information systematically. As a result, this helps to construct and maintain stable beliefs systems about global climate change. In addition, an individual's need to know has to be strengthened by offering the conviction that a particular problem or issue is personally relevant.

7. The power of journalism to influence perceptions of big, long-term issues such as global climate change is muted in a landscape rich with other influences. People receive abundant piles of messages everyday. That is why even the most skilful media messages face formidable competition from everyday life. The study of individuals' attention paid to television program reveals that comprehension of what people learn from the typical television news program is poor because most of them also spend most of the time doing something else such as reading, eating, talking. Most people cannot even recall a news item from the previous evening's news fare (Robinson and Levy, 1986).

Therefore, it is essential for an evaluator to design an appropriate evaluation plan for a global warming campaign in particular. Or else, more and more ineffective ones will be launched and thereby waste both time and money. Framing theory can be useful for campaign evaluation design as it can help to reveal the existing frames and the suggested ones.

2.3 FRAMING THEORY

Introduction

This section discusses the fundamental literature on framing theory, examining scholars' various perspectives, in order to develop a framework that will guide the data collection process as well as data analysis in this research project. Framing theory will be used as the major concept of this thesis. All the research questions outlined in Chapter 1 are theoretically enhanced through the discussion of framing theory. This is particularly true of the following questions:

RQ1: What were the private frames on global warming in Thailand?

RQ 4: What is the relationship between the expert private frames and the campaign frames on global warming in Thailand?

RQ 5: What is the relationship between campaign frames and TAM frames on global warming in Thailand?

This literature review begins with the history of framing theory that was first popularized by anthropologists and widely applied by social scientists (positivists) and discourse analysts (interpretivists). In the first part, different approaches on the use of framing theory in communication studies, as well as the influence of previous works from other fields, are discussed. The next part looks at the use of framing theory in public relations studies where the role of frames becomes more crucial particularly in the process of message design and audience feedback (Hallahan, 1999). Different frames are known to exist among audience members because of public segmentation, particularly in relation to climate change communication (Leiserowitz, Maibach, and

Light, 2009). This study intends to extend the public relations approach to framing theory to cover the Thai context; framing theory is popular in mass communication studies in Thailand but not many studies have actually been conducted with the focus on framing used in public relations.

1. Framing Theory: Another Communication Paradigm

Framing theory has been increasingly studied under a wide range of approaches. Even though some scholars criticized the original framing theory bible, *Frame Analysis* (Goffman, 1974) as either too cumbersome to read (Davis, 1975) or lacking in systematization (Gamson, 1975), the book has been seminal in its influence on many very different traditions over the past three decades – from sociology (Benford and David, 2000) to psychology (Tversky and Kahneman, 1981), and communication studies (Entman, 1993). Indeed, the current state is that frame analysis may be applied by a number of disparate approaches by communication scholars. These approaches include public relations (Hallahan, 1999), news media and journalism (D'Angelo, 2002, Maher, 2001) and communication effects (Scheufele, 1999).

Goffman is most widely quoted when it comes to defining 'frame':

"I assume that definitions of a situation are built up in accordance with principles of organization which govern events [...] and our subjective involvement in them; frame is the word I use to refer to such of these basic elements as I am able to identify. (p. 10f)"

Neither are frames, in Goffman's view, consciously manufactured, nor are they found to naturally exist. Rather, they are basic cognitive structures that guide the

perception and representation of reality. In other words, reality is not just out there but exists as frames in people's minds. These frames help them understand the world. It is through communicative interactions that we unconsciously adopt frames, an insight drawn from another ontological paradigm known as symbolic interactionism (Blumer, 1971). This latter approach to the social construction of reality (Berger & Luckmann, 1966) was popularized in the late 60s. This approach identifies social reality as the result of how people interact and their use of symbols to create meaning. Opposed to the structural-functional explanations that predominated early psychological thinking, constructivism values the existence of various realities and the subjectivity of human beings (Littlejohn & Fuss, 2009). Thus, the focus of Goffman's book is on the organization of experiences rather than the organization of society. The unit of analysis includes individuals and their interactions with self and society. The extension to the previous assumption includes how they perceive the world through a certain frame which represents the structure holding the fragments of experiences towards certain reality. Goffman (1974) uses the word frameworks to categorize different types of frames influencing how human beings perceive the world – that is, primary frameworks and social frameworks.

As reality is too large for a human being to capture everything, framing is the process by which an individual perceives and understands reality. Walter Lippmann (1922) proposed the following solution to the dilemma of communicating reality:

“The real environment is altogether too big, too complex, and too fleeting for direct acquaintance. We are not equipped to deal with so much subtlety, so much variety, so many permutations and combinations. And although we have

to act in that environment, we have to reconstruct it on a simpler model before we can manage it. To traverse the world men must have maps of the world (p. 16).”

He attempts to capture the concept of the world outside and the pictures in our heads. These are fundamental concepts in framing. Therefore, frame analysis in the early stages is the proposition to respond to the need for explanation of how people come to understand the world from their cognition and interaction. This is also in line with the idea of the schemata of interpretation proposed by Goffman (1974).

Not only can framing concept cover the individual thinking process, but also it can include the process of communication in news media (Scheufele, 1999). From the studies at microscope level of individual experience to the mass expansion of journalism, frames are viewed as the process of how journalists deliberately frame certain issues inside the audience’s heads and how the response of the audience plays a role in creating other news reports. Drawn from agenda-setting theory as a reflection of the all-powerful media effect era (McQuail, 2005), framing is considered as another element of the process together with priming. There is also the question of the solid basis of framing theory as a theoretical paradigm (Maher, 2001).

Several attempts have been pursued to review the wide range of approaches subsumed under the heading of frame analysis. Entman’s article (1993) is considered the most famous starting point of framing theory as a paradigm. Although Iyengar (1991) had earlier adopted the concept in media studies, the article has not been as widely cited as Entman’s (Konig, 2011). D’Angelo (2002) advocates the benefits of framing

research by working across paradigms including cognitive, constructionist and critical. Cognitive is the study within the psychological approach. The focus is on the individual information process in order to come to perceive, understand and evaluate the world. This direction also leads to the development of cybernetic and socio-psychological traditions in communication theory (Littlejohn & Foss, 2009). Another direction of framing studies is taken in the tradition of constructionism, a tradition that distinct from that of constructivism despite the ambiguous use of the terms in the field (Young & Collin, 2004).

For each approach, the research questions about frame are different based on the philosophical assumptions and methodological guidance. The main questions raised in media and communication research regarding framing include: precisely how are issues constructed and discourse structures and meaning developed (Reese, 2003). These types of questions put more emphasis on the interpretive paradigm rather than positivism. In later work, Reese (2009) proposed a critical constructionist perspective combining the separate paradigms. In the former concept or constructivism, frames are viewed as expressions and outcomes of power, equally distributed with public opinion dominating and enlisted accordingly, while the latter or constructionism sees frames as “interpretive packages” in creating understandings of the social world (p. 2). Thus, framing theory is still an ongoing debate among scholars particular in communication studies despite the various approaches used to explore the concept. One of the main topics for argument is the distinguishing features of framing theory and the other concepts previously constructed.

2. Framing Theory and Related Concepts

Framing theory has always been confused with previous constructs such as agenda-setting (McCombs and Shaw, 1993), as well as priming (Brewer and Graf, 2003) and mental models (Van Dijk, 2009). In fact, the terms have been used to compare, incorporate and differentiate in many works. Agenda-setting emerged in the school of powerful media assumptions. It involves pushing issues from the arena of public discussion to the media agenda. The issue then becomes public policy agenda. This is when certain issues and social problems can receive official acknowledgment, validation, and the fullest possible hearing (Manheim, 1987). Agenda-setting theory puts the focus on the ability of the media to tell people what to think and what to think about. Media can create general top-of-mind salience about a topic through frame setting or second-order agenda setting (McCombs & Shaw, 1993). They also suggest the convergence of the two terms to even strengthen the unity of theory to be able to understand how media construct the picture of the world and how the public responds to those pictures (McCombs & Shaw, 2001). Framing becomes part of the agenda-setting process as media agenda and the public agenda requires certain frames to communicate. Thus, this enhances the media's ability to even tell people how to think about certain issues. In sum, agenda-setting refers to the media's ability to influence which issues people think about while framing is the influence of media on how people think about and interpret ideas and issues, particularly how they think about solutions to problems (Bales & Gillian, 2004). Framing is seen as an extension of agenda-setting theory.

Other researchers have argued against this co-opting of framing theory by agenda-setting theory. Maher (2001) differentiates between the use of agenda-setting theory and framing theory by using systems theory. He asserts that agenda-setting theorists define the relationship of elements within the text, while framing theorists allow the authors of the original texts to define the relationship. Agenda-setting theory makes use of objects (issues, people) and attributes (properties associated with the objects) to understand the texts in question while framing theorists put the focus on key concepts of relationships (among elements organized by the communicator) and the environment (what news stories do and do not describe). Basically, the scope and focus of each theory are different even though the main goal of study is similar.

Framing is, therefore, not similar to agenda-setting in terms of the range of media effects. Some scholars still consider framing as a sub-set of agenda-setting. They question the opaqueness and the feasibility of framing in media studies. In fact, from this perspective, framing is only the tool for journalists to set the agenda. Rather than focusing on the effects of media, this school of thought concentrates on the function of the media to help people make sense of the world. This is to say that as we go about making sense of our world, the mass media serves an important function as the mediator of meaning — telling us what to think about (agenda-setting) and how to think about it (media effects) by organizing the information in such a way (framing) that it comes to us fully conflated with directives (cues) about who is responsible for the social problem in the first place and who gets to fix it (responsibility) (Frameworks Institute, 2011).

Priming is also another concept used in media studies and used vis-a-vis with framing. Priming is the process by which activated mental constructs can influence how individuals evaluate other concepts and ideas (Domke et al., 1998). From their view, media framing seems likely to foster priming effects by highlighting some dimensions of issues while excluding other aspects. Priming is a product of the framing process. Moreover, its effects can also be identified as parts of information processing cognition which are based on schema theory (Fiske and Taylor, 1991). The theory posits that people organize their perceptions of the environment into cognitive knowledge structures – defined as the situational nature of frames (Goffman, 1974). In other words, meanings are linked to the context in which they arise including specific interaction, occasion, and social dynamics. The media framing of issues plays an important role when the objects are more obscure and it may activate relevant cognitive structures to guide information processing and the construction of attitudes (Zaller, 1992). Within the framing process, there is a priming effect. This is when a certain issue has been put under the spotlight. This can be done by news reporting devices such as headlines.

Mental models – sometimes referred to as situation models – are the subjective representation of an episode (Van Dijk, 2009). It refers to the model accumulated from people's personal experiences rather than the cultural model, or socially shared knowledge (Van Dijk, 1999). This is when people form their own personal representations of an event, with their own perspective, interests, evaluation, emotions, and other elements based on their unique personal history or their current subjective experience. Similar concepts were discussed by Nisbet (2010) as he applied the terms

'mental box' and 'perceptual lens' to refer to value constructs including religious beliefs, political partisanship or ideology.

It is obvious that people approach the world not as naïve, blank slate-receptacles who take in stimuli in some independent and objective way, but rather as experienced and sophisticated veterans of perception who have stored their prior experiences as an organized mass. This prior experience then takes the form of expectations about the world, and in the vast majority of cases, the world, being a systematic place, confirms these expectations, saving the individual the trouble of figuring things out anew all the time (Tannen, 1993). Therefore, understanding is frame-based, not fact-based, theory-based or data-based. Thus, a mental model can be seen as the existing frames developed from past personal experience and external influences.

Moreover, people use mental shortcuts to make sense of the world. Since most people are looking to process incoming information quickly and efficiently, they rely upon cues within that new information to signal to them how to connect it with their stored images of the world. The "pictures in our heads," as Lippmann (1992) called them, might be better thought of as vividly labelled storage boxes – filled with pictures, images, and stories from our past encounters with the world and labelled youth, marriage, poverty, fairness, etc. The incoming information provides cues about which is the right container for that idea or experience. Also, the efficient thinker makes the connection – a process called "indexing" – and moves on.

The next section reviews of the concepts of frames and framing used in previous communication academic works.

2.1 Frames vs. Framing

In the context of communication, the origin of the term framing arises from photography and cinematography, where framing refers to such variables as camera angle and perspective in the styling of a visual message (McComb and Ghanem, 2001). Framing is sometimes seen as the part of language used to describe certain issues among other devices such as strategies and narratives (Nerlich, Koteyko, and Brown, 2009). Originally, the term was used for concrete concepts such as those in the communication production industry but was later employed to focus more on the abstract idea inside people's heads as well as the process of communication as a whole.

There are major differences between the words frames and framing as defined by the scholars from different fields. The word 'frame' refers to the object or the thinking frames existing in the communicator, the text, the receiver, and the culture (Gamson, 1992). Frames are sometimes associated with similar terms such as schemata, categories, scripts, or stereotypes (Goffman, 1974). Rather than seeing frames as a single object, Gamson and Modigliani (1989) suggested a set of "interpretive packages" which give meaning to a particular issue. Such a media package is organized by a symbol of stylistic devices for presentation that provides an overarching frame for the story including metaphors, exemplars, catchphrases, depictions, and visual images. Thus, frames are concrete concepts that can be studied through certain symbolic devices.

Moreover, as reality is too large to capture, people attempt to find ways to make sense of the world. Consequently, under the time constraints of news reports, journalists try to find ways to simplify, frame, or make “maps of the world” to communicate their stories (Pan and Kosicki, 1993). Frames are viewed as strategic resources and function as central organizing themes that connect different semantic elements of a news story consisting of headlines, quotes, leads, visual representations, and narrative structure. All the elements are presented as a coherent whole to suggest what is at issue. Therefore, the elements of frames can be analysed separately based on their functions in news reports as units of analysis.

Frames can also be located at any point of the communication process. Gamson's (1992) study of the Cold War frame in the U.S. news suggests that frames have at least four locations in the communication process: the communicator, the text, the receiver, and the culture. Each frame can hold a different ideology towards the issue. Also, from their study of the war on terror, Reese and Lewis concluded that frame suggests an active process and is a result of being both a noun and a verb (Reese & Lewis, 2009). Therefore, frames are viewed as a part of texts and can be identified within different elements of communication process. Frames imply the sense of status as well as action.

Framing, on the other hand, can be viewed as human information processing especially when it consumes media news (Scheufele, 2006). This refers to the process of how frames are created, maintained, or deleted. This is the same idea drawn from the symbolic interactionism school of sociology (Blumer, 1971). This paradigm proposes opposite attempts of human behaviour study from the structural-functional explanations

which are based on the instinct and external forces. Rather the constructionists contend that people act in accordance to their thoughts which results from their interaction and use of symbols to create meaning. This human experience approach is also known as the phenomenological tradition (Craig and Muller, 2007). Thus, people's actions are based on what Lippmann (1922) described as "the pictures inside our heads," rather than "objective reality" (p. 3).

Framing is a process that essentially involves selection and salience according to Entman's (1993) definition:

To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation (p. 208).

Basically, the roles of framing are to define the problem, to diagnose causes, to make moral judgments, and to suggest remedies. From the beginning to the end, framing plays an important role in communicating certain issues especially those unfamiliar to society or the public through media use.

Some scholars view frames as a part of framing. Reese and his colleagues (2001) see framing as referring to the way events and issues are organized and made sense of, especially by the media, media professionals and their audiences (p. 7). "Frames are organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world." Thus, framing is an ongoing process which consists of several frames depending on the contexts. In the

same vein based on the chronology, Gitlin (1980) viewed frames as “persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion, by which symbol-handlers routinely organize discourse.” (p. 7). Frames are the elements in the framing process; indeed some are also seen as products of the process.

From their analysis of news coverage, the framing process goes beyond the ‘transmitting’ function of the news to ‘reify’ the policy as uncontested, and ‘naturalize’ it as a taken-for-granted common-sense notion instead (p. 777). Framing is viewed as an ideological process within a larger political context, with the task for analysis being to show more precisely how these meanings are connected and support certain interests (Carragee and Roefs, 2004). This is also known as an interpretive approach or a broader cultural approach as suggested by Hertog and McLeod (2001). They focus on the dynamic aspect of frames, which are used to assimilate and make sense of new information. This is an extension of Entman’s ‘cascading’ process of frame influence from White House to press (2003).

Counter-frames: The work of framing theory has also developed in the field of discourse analysis. Discourse is the study of power through discursive practices (Van Dijk, 2009). Therefore, aspects of dominant and oppositional discourses are sometimes applied in framing analysis (Tennen, 1993). It is essential to understand the dynamics of framing in this manner so as to reveal the ideological oppression hidden in everyday conversation. The dominant frame can be a framework of expectation created by the stories people often see or hear. These habits of thought and expectation lay the foundations for everything else people learn afterwards. Therefore, not only does one message have to compete with every other message out there in the world, but also with

all the messages people already have in their heads. The more the media emphasizes certain aspects of an issue and ignores others, the more dominant the corresponding schema becomes and the easier it is for those highly emphasized dimensions of a problem to crowd out other considerations (Nisbet, 2009). This is the notion of counter frames or oppositional frames that can occur in the process of framing. The concept is also mentioned in the study of political communication by Miller, Andsager and Riechert (1998) who explain that opposing stakeholders try to gain public support for their positions, often not by offering new facts or by changing evaluations of the facts, but by altering the frames or interpretive dimensions for evaluating the facts.

Moreover, opposing frames can be proposed by rival stakeholders via communicative devices. The opposing party to a controversy may attempt to displace a media frame by proposing their own exemplars, visual image, or metaphor to organize a new story (Cox, 2006). For example, an NGO tried to give their examples of figures and messages to for use against a drilling plan in the Arctic National Wildlife Refuge.

However, some scholars view frames as organizing devices rather than one aspect of a matter itself. In a debate, individuals can disagree on an issue but share the same interpretive frames (Gamson and Modogliani, 1989). Thus, people have one grounded frame with which to consider or understand an issue. Within such a frame, there can be pro, anti, and neutral arguments (Tankard, 2001). This dynamic nature of frames suggests the ability to change frames based on existing ones. Thus, the next section reviews the process of re-framing widely used in message design research to communicate certain issues effectively.

Re-framing: The term “re-frame”, according to the Frameworks Institute (2011) means changing the context of the message exchange so that different interpretations and outcomes become visible to the public. This offers a way to work systematically through the challenges that are likely to confront the introduction of new legislation or social policies, to anticipate attitudinal barriers to support, and to develop research-based strategies to overcome public misunderstanding.

Every social issue has a variety of dominant frames that can pull the public in many different directions. Even though the issue seems to be urgent from the perspective of advocates, it does not necessarily create the same concern on the public agenda (Nisbet, 2009). The communicators have to ensure that their message will not be drowned out. Communication can both help and hinder social change (Bales & Gilliam, 2004). For example, when communications are inadequate, people default to the “pictures in their heads” or dominant frames – whereby stereotypes are reinforced and civic participation is squashed. On the other hand, when communications are effective, people are then able to see an issue from a different perspective.

2.2 Types of Frames

There are two major types of frames proposed by Iyengar (1991), namely episodic and thematic framing. They have very different effects on how people view a given problem and whether people will see the need for individual-level and/or broader social or institutional solutions to the problem. Episodic framing suggests the responsibility lies with an individual or individuals, while thematic framing suggest society at large is responsible for the problem. Media reports on social problems that use episodic versus thematic frames predispose the audience to attribute the

responsibility for these problems very differently. In short, episodic frames suggest individual responsibility while thematic frames suggest systematic causes (Iyengar, 1991).

Researchers have shown that the type of news frame used has a profound effect on the way in which individuals attribute responsibility. Iyengar (1991) concludes that episodic framing tends to elicit individualistic rather than societal attributions of responsibility while thematic framing has the opposite effect. Thus, the types of frames are important to the selection of frames to present. The consequences can be varied depending on the kind of issue itself.

Another categorization of frames is drawn from message structures. After examining news stories, Rhee (1999) identified two major frames in campaign coverage: strategy and issue. In political communication, particularly from the study of political campaigning, strategy coverage puts the focus on the candidate strategy while issue coverage – also known as policy coverage – concentrates on the problems and the proposals.

2.3 Frame Sources or Frame Sponsors

When journalists confront an unfamiliar topic, they turn to the frame sources – sometimes referred to as frame sponsors (Van Gorp, 2010). These experts or intermediate experts (Li Xiufang and Chitty, 2009) may not be explicit in the text or news, but they play an important role in shaping the frames of journalists or any other message creators. Some sources cover wider groups than frame sponsors. The latter include those who use frames for strategic purposes such as pressure groups, NGOs,

and political parties (Kruse, 2001). These frame sponsors can be identified from the media they use including the advocate's press release, pamphlets, and brochures in which one frame often dominates. In other words, these frame sponsors provide certain frames for journalists to use in developing news stories. Frame sources, however, cover a wider range of experts involved with the issue. They may not demonstrate their frames explicitly in any media outlets but they are always referred to as the sources of information when it comes to certain issues under their expertise.

2.4 Functions of Frames

Frames have several functions that vary according to the perspective taken and the use of media. A core function of framing is to define issues whether problematic or not. Regarding problems, it can indicate causality, what has to be done, who is behind the cause, consequences, and solutions, and to convey moral judgment (Entman, 1993). Some frames can indicate the origins of the issue while others identify with the consequences. All frames, however, have the ability to promote a specific interpretation (Van Gorp, 2010). From a critical view which mainly focuses on the power and oppression in communication, media frames often function rhetorically to sustain dominant discourses about the environment. In his book *Image Politics*, DeLuca (1999) asserts that the mainstream media tends to negatively frame – and thus marginalize – radical environmental groups.

From the view of constructionism, it is still the media frames that connect different semantic elements of a news story into a coherent whole to suggest what is at issue. Frames are seen as communication devices for people to perceive and understand social issues through media presentation. Media discourse is part of the

process by which individuals construct meaning through their interactions with others (Gamson and Modigliani, 1989).

In environmental communication, Shanahan and McComas (1999) observe that environmental media coverage is hardly ever the simple communication of a 'fact' because journalists use narrative structures to build interesting environmental coverage. Hence, "studies of environmental communication show that media portrayals of environmental issues are presented from the start as stories; because journalists and media programmers must interest audiences, they must present their information in narrative packages" (pp. 34-35).

In other words, how an issue is framed is a trigger to these shared and durable cultural models that help us make sense of our world. When a frame ignites a cultural model, or calls it into play in the interpretation, the whole model is operative. This allows people to reason about an issue, to make inferences, to fill in the blanks for missing information by referring to the robustness of the model, not the sketchy frame. Thus, frames are essential devices for the individual to understand the world as well as for society to bring about mutual understanding toward an issue through communication. The next section reviews academic works concerning the framing concept or theory in Thailand.

Framing theory is not really popular among Thai academic scholars in general. In communication studies, mainly those with journalism concentration will apply this theory to study news and political and social context especially from newspaper sources. For example, Tip-Anong Takkavuthiwong (2009) studies study the framing in

daily newspapers of the People Alliance for Democracy (P.A.D)'s movement during 2008. On the opposite political side, Narumon Kasemsuk (2008) studies the framing of the Thaksin regime with Nietzschean analysis where she looks at the factors and exact frames that were portrayed during his election. Another work is by Krasoon Skulpone (2001) who studies newspaper frames of Banharn, Chavalit and Chuan administration at the end of their periods. He specifically looked at the negative frames drawn from the news. All of them have identified different factors that affect the framing process from journalistic perspective. However, there is no specific work that examines the public relations campaign frames that have an effect on public perception. Thus, this dissertation will identify the frames related to global warming issues and identify the frames to be used for effective campaign in the future for Thai context. From the literature review, below is the model of framing process in global warming campaigns and also the possible methods to find the effective frames to build the future campaigns.

CHAPTER III

METHODOLOGY

Introduction

This chapter discusses the methods applied in this thesis including in-depth interviews, document analysis, and survey. The mixed methods research approach is employed to examine the framing process of global warming campaigns. This chapter starts with methodological definitions and their rationales. The research design covers what is defined as research conceptualisation and operationalisation as well as how it can fulfil the proposed objectives and research questions. The next part lays out the protocols used for each method in detail. The methods discussed include in-depth interviews, document analysis and survey respectively. Each section consists of the data sources, data sampling, research procedure, data collection, data analysis, and data report.

1. Framing Analysis with Mixed Methods Approach

This thesis research is based on framing theory as addressed by mass media scholars (e.g. Entman, 1993; D'Angelo, 2002; Reese, 2007; Scheufele, 1999) as well as public relations theorists (e.g. Hallahan, 1999; Coombs, 1999; Stanton, 2007). The most dominant type of frame used in communication studies from both traditions is the construction of reality in communication (Lim and Jones, 2010). The focus is placed more on the process including the communication attributes or properties rather than the individuals' cognitive principles. As a result, a variety of methods are utilized to examine the frames existing in different communication elements. Despite the

tremendous attempts to measure and identify frames from different epistemological and ontological assumptions, the framing concept has proven elusive to measure (Maher, 2001, p. 84). While Entman (1993) encouraged the merging of the scattered framing studies in a drive towards a certain paradigm direction, D'Angelo (2010) recently shifted the focus to critical school beliefs in the diverse approaches emerging from the framing theory school. This thesis, however, attempts to make a compromise between both stances and propose a middle path for framing studies to be flexible enough to cover any epistemological vehicles to yield any possible truths.

In global warming and climate change communication studies, framing theory has been applied to find out the frames existing in different societies – both western and eastern countries such as the U.S. (Nisbet and Mooney 2007), U.K. (Wilson 2000), China (Wu 2009), and Pakistan (Janjua, Thomas and McEvoy 2010). The studies have drawn on different data sources ranging from texts (Nerlich and Koteyko 2009; Vihersalo 2008) to public perceptions and audience segmentations (Leiserowitz, Maibach and Roser-Renouf 2008). Theory provides tools to enable analyses of frames and the process of framing in the media arena. Both inductive and deductive approaches are used to investigate existing frames. The former appears to be more popular among studies of texts and communicators' insights. Based on qualitative methodology, textual analysis techniques such as thematic categorization and narratives are used to identify the specific frames under certain circumstances or cultures (Gamson and Modigliani, 1989). On the other hand, the deductive approach focusing on the quantitative approach is used with generic frames (Semetko and Valkenburg, 2000) and to yield the generalizability of framing theory by conducting surveys or experimental research.

Consequently, framing analysis is widely known as an incoherent methodology (Konig, 2009). Exhaustive reviews of previous methods used in both mass communication studies and public relations fields are available (e.g. D'Angelo et al., 2010; Lim & Jones, 2010). They provide overviews of how scholars apply different methods with framing theory. However, there is a limited amount of research combining both approaches to shed light on the framing process in communication studies.

1.1 Questions of Reliability and Validity in Framing Studies

Based on his expertise in framing analysis, Van Gorp (2010) offered four rules for securing the reliability of results. First, limit the deductive phase to frames that are clearly mutually exclusive which can be up to two frames to reach an acceptable level of inter-coder reliability (Tankard, 2001). The next strategy is to minimum the coders' need to interpret the material by basically applying simple yes/no questions. There are lists of questions developed by framing analysts who reported good levels of reliability (Semetko and Valkenburg, 2000). Third, it is helpful to provide sufficient time to train coders. For example, giving them enough time to discuss the coding experience can yield cognitive schemas that are in line with the propositional content of the frame to their minds. Last, the researcher should not expect to reach a high level of coder agreement for framing devices that are only occasionally applied in text. It is also suggested that framing devices be used that are regularly used in texts, such as lexical choices and metaphors. These suggestions are based on the deductive approach in which the focus is more on the existing frames rather than identifying emerging ones. However, from the stance of the inductive approach it would be argued that the existing frames are not sufficient for answering the questions for a particular situation where

different frames exist. This is also true when frames are studied in different cultural contexts.

There are critics that focus on the limitations of one method over another but barely offer any alternative methodology (Matthes and Kohring, 2008). Reliability and validity are also weaknesses of framing analysis because of the wide array of possible framing approaches (Maher, 2001). Even though some scholars try to solve the problems of reliability (Semetko and Valkenburg, 2000) and validity, framing analysis is still very much a developing field (Konig, 2009). Therefore, applying the strengths from both approaches, this research attempts to contribute the use of mixed methods in framing analysis to investigate the communication process of global warming campaigns in Bangkok. The use of different methods should yield better and stronger reliability and validity.

1.2 Framing Analysis with Mixed Methods

While some scholars suggest the use of existing frames to explore the issue in order to avoid redundancy and inconsistency of findings (Nisbet, 2010), others recommend the use of an inductive strategy to reconstruct the underlying, culturally embedded frames in a text (Van Gorp, 2010). The latter, moreover, have raised the issue of the position of research in the interpreting process. The “paradigm war” (Guba and Lincoln, 1989) exists even within major schools of thought. Framing theory is separated into two major approaches: quantitative vs. qualitative; deductive vs. inductive; positivism vs. interpretivism. Even though framing is a theoretically demanding concept, it has proven elusive to measure (Maher, 2001). There is a question of the possibility of combining two opposing paradigms with the criteria of their

difference in fundamental philosophical assumptions epistemologically and ontologically (Smith, 1994). Many scholars, however, have proved that it is possible and indeed has a bright future (Greene, 2006).

In spite of their similar ways of knowing the truth, interpretivists and cultural or radical scholars hold different ideas as what the truths should be. From the viewpoint of interpretive constructivists who believe in many truths and value the subjectivity of reality, they assert that the aim of framing analysis should always be to identify a variety of alternative frames rather than being associated with political and economic elites or hegemonic process (Van Gorp, 2010). Interestingly, D'Angelo (2002) used to concur with this view of framing as part of the social construction of meaning but recently his writing (D'Angelo, 2009) has turned to approach framing analysis from the critical perspective adding the value of power. Even though the idea of power has been widely used in the search for truths since Foucault's (1981) era, it will not be included in this thesis. The concept is very subjective and it is too far-fetched for the researcher to capture the latent power hidden within the layers of history. It will, nevertheless, be discussed where possible in the discussion chapter.

For this thesis, the concept of framing is the one coined by Entman (1993) with the emphasis on the process of how certain frames are chosen to become more salient than others by those having access to media distribution such as journalists and public relations practitioners. These chosen frames will eventually become familiar in the receivers' minds so that they use them to evaluate other messages as a part of the cognitive process (Goffman, 1972). Thus, frames are something that can be co-created as an ongoing process that can be changed over time and space with the one frame

becoming more outstanding than others. As Kitzinger (2007) suggested, framing analysis could be conducted in the process of communication which process she trisected into the following elements - production, content and audiences. She urged the researcher to cover all three aspects in one study to understand the frames in a context. This is also another guideline for this study. Therefore, three groups of communication elements will be investigated to identify global warming frames in Thailand. The first is the 'Identified Framing Sources (IFS)' – those who are involved in co-creating the frames of certain issues in society. As global warming is the major focus, these people are experts in global warming in Thailand and include scientists, government officers, environmentalists, and journalists. Next, the campaign content is examined to look at 'Identified Campaign Sources (ICS)'. The documents cover the primary campaign materials developed by the Bangkok Metropolitan Administration from 2007-2010 and the mediated campaign information released in different media such as newspapers, magazines, and websites. The last and important element of communication is the audience. 'Target Audience Members (TAM)' are Bangkok residents who have experienced BMA campaigns. They have to be able to identify the different campaign topics and answer the proposed questions in the survey.

There have been many attempts to define mixed methods research from different fields of studies. Generally speaking, it is an approach to knowledge (theory and practice) that attempts to consider multiple viewpoints, perspectives, positions, and standpoints. This always includes the standpoints of qualitative and quantitative research becoming synthesised into one approach (Johnson, Onwuegbuzie and Turner, 2007). Moreover, this way of thinking is an orientation towards social inquiry that actively

invites researchers to participate in a dialogue about the multiple ways of seeing and hearing, the multiple ways of making sense of the social worlds, and the multiple standpoints on what is important and to be valued and cherished (Greene, 2006). A better understanding of the multifaceted and complex character of social phenomena can be obtained from the use of multiple approaches and ways of knowing. This research is another contribution to the study of mixed methods applying both qualitative and quantitative approaches in a study of global warming campaign communication. Framing theory, in fact, as used in this study, has an open nature when it comes to being studied from different perspectives. This thesis can be defined as a mixed method research applying quantitative and qualitative approaches based on framing theory driven in different stages of study including the existence of frames and the framing process. Believing that some frames can be yielded inductively, the researcher used qualitative research methods such as interviews and thematic analysis to reveal the global warming frames found in expert interviews and campaign materials. On the other hand, to prove that some existing frames can be tested and measured, the researcher used quantitative methods such as target audience survey to answer the research questions and hypotheses. The integration mainly took place in the data analysis part and the discussion where results from both approaches were compared and contrasted and the possible dominant frames emerging from the global warming issue in Thailand and the potential frames for use in global warming campaigns in the future discussed.

Some communication scholars, however, do not agree with the combination of two approaches. Even though the mixed methods research can offer breadth and depth

in a study, a multidisciplinary field like media and communication studies is always at risk of succumbing to 'superficial eclecticism and a lack of both stringency and depth as regards methodological sensibilities' (Hoiijer, 2006, p. 103). Very few researchers are able to use both approaches with a high level of success because often the processes fundamental to them are not compatible. They support the great depth in utilizing one way or another rather than covering both with mediocre results (Wrench et al., 2008). This should be a sufficient rationale to give up the attempt to adopt both approaches in a single study. It is, actually, a good reminder of the limitations within this type of research. The drawbacks can be anticipated in the final stage where the research evaluation is made rather than at this stage or the process of designing the research.

Generally, there are five main purposes for mixed-method evaluation design including triangulation, complementary, development, initiative and expansion (Greene, Caracelli, and Graham, 1989). This research design is based on three main objectives. First, the mixed method offers triangulation in action (Jick, 1979). From its classic sources, triangulation refers to the designed use of multiple methods, with offsetting or counteracting biases, in investigations of the same phenomenon in order to strengthen the validity of inquiry results. The use of both qualitative and quantitative helps to increase the validity of constructs, in this case including private frames, campaign frames, and public frames. Moreover, the complementary purpose is to seek elaboration, enhancement, illustration, and clarification of the results. Textual analysis as well as in-depth interviews help to complement the design of the survey in the third phase. The last purpose is to extend the breadth and range of inquiry by using both methods for different inquiry components. This research used both qualitative and quantitative

methods to investigate the same conceptual phenomenon: global warming frames in Thailand. The applications of both methods occurred in parallel as well as sequentially in different stages of the research.

This mixed methods research can also be described as being of the “concurrent triangulation” design (Cresswell et al. 2003). It is closest in form to the integrated mixed methods design (IMM) proposed by Castro, Kellison, Boyd, and Kopak (2010). Concurrent designs are characterized by the collection of both types of data during the same stage. The purpose of the concurrent triangulation design is to use both qualitative and quantitative data to more accurately define the relationships among variables of interest. However, the IMM design focuses on parallelism in study development allowing “seamless” data conversions between two bodies of evidence and leading to re-contextualisation in the interpretation stage (p. 345). The full integrative perspective can generate rich deep structure analyses and interpretations to offer enhanced explanatory power above and beyond the sole use of a qualitative or quantitative approach. The next part discusses in detail the research design and the implications of mixed methods in different stages.

2. Research Design

Initially, this research was conducted following a sequential exploratory design. The design is characterized by an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis. However, due to the time constraints of the thesis, the research had to be conducted concurrently with the priority on the qualitative aspect. The data collection process was concurrent while the qualitative analysis was sequential. The majority proportion of the process comprised

the qualitative approach to figure out the frames from expert individuals and campaign-related documents. At the same time, a quantitative survey was developed and distributed to test frames in the target audience. Analysis of in-depth interviews was first, as it was inductively analysed. This was to avoid the pre-existing frames in the researcher's mindset. The analysis that then followed was the content analysis of campaign documents with the final analysis being that of the questionnaire. Ultimately, the findings of these three methods were integrated during the interpretation phase. This is when the strategic frame analysis was applied to discover the relationships among those frames.

The main objective of the thesis project is to uncover the role played by framing in the relationship between the Thai Bangkok Metropolitan Administration (BMA) global warming campaign (henceforth referred to as campaign in the research questions) and its target audience members. There are four major research questions based on the campaign communication elements and process with sub-research questions posed under each main research question. In order to obtain answers for the proposed questions, different methods were applied. As noted above, this project employed concurrent mixed methods research in the attempt to combine two approaches to examine the global warming frames from different communication elements including communicators, texts, and audiences. The research design was laid out based on the research questions and possible protocols within time constraints and resource limitations.

The first research question (RQ1) is 'What were the private frames of global warming in Thailand?' The global warming experts were the main focus here. A

structured in-depth interview was used to elicit their insights on the subject. The direction of the probing questions included their personal frames, their views on other experts' frames, their frames on global warming campaign, their frames on global warming media and their frames on how to re-frame the issue in Thailand. The output of this part was the frames of Identified Framing Sources (IFS).

The second research question (RQ2) is 'What were the mediated frames portrayed in the BMA campaign on global warming in Thailand?' To answer the question, document research and structured in-depth interviews were applied to examine both primary and secondary campaign documents as well as to gain insights into the campaigners or BMA officials who are responsible for the campaign project. This part aimed at revealing the BMA Identified Campaign Frames (ICF). Thematic analysis was used to analyse the codes drawn from the documents and the interviews. The thematic categories of ICF were the output of this process. The first process was qualitative-based as the researcher applied the interpretive approach to read and categorize frames from texts and transcriptions. The second part leaned towards the quantitative approach, as numerical counting was used to find the most mentioned frames. The final output from this procedure was used for relationship analysis with other frames drawn from other research questions.

The third research question (RQ3) is 'What were the global warming frames in the minds of the target audience members before and after the campaign?' As the number of participants was large, survey research was conducted to examine Bangkok residents' frames before and after the campaigns. Based on the deductive approach, the questionnaire was developed based on previous works on climate change (e.g.

Nisbet, 2009; Marlone, 2003). Eight major frames were drawn from literature and ingrained Thai values such as the influences of Buddhism and His Majesty King's sufficiency economy. Not only did the questionnaire tackle the respondents' frames, but the questions also included their opinions toward BMA global warming campaigns, and their global warming reduction behaviours. Another profile aspect collected from this questionnaire was that of demographic information, particularly their geographic background. This was then used for analysis to ascertain the rationale behind certain frames.

The fourth and the fifth research questions placed the focus on integrating the analysis of collected data from three methods. The fourth question (RQ4) is "What is the relationship between the expert private frames and the campaign frames on global warming in Thailand?" This can be answered by comparing the output from both data sets and identifying the similarities and differences. The final research question (RQ5) is "What is the relationship between campaign frames and TAM frames on global warming in Thailand?" The comparison technique was also employed at this stage. It is hoped that the ultimate outcome from this research is the identification of effective frames for use in global warming campaigns in Bangkok, which will be drawn from the integrative framing analysis.

2.2 Scope

The researcher collected campaign documents related to the global warming campaign projects of Bangkok Metropolitan Administration (BMA) from 2007 to 2010 from the BMA office. This included printed media such as newspapers, magazines, and online archives. The global warming experts resided and gave their consent to the

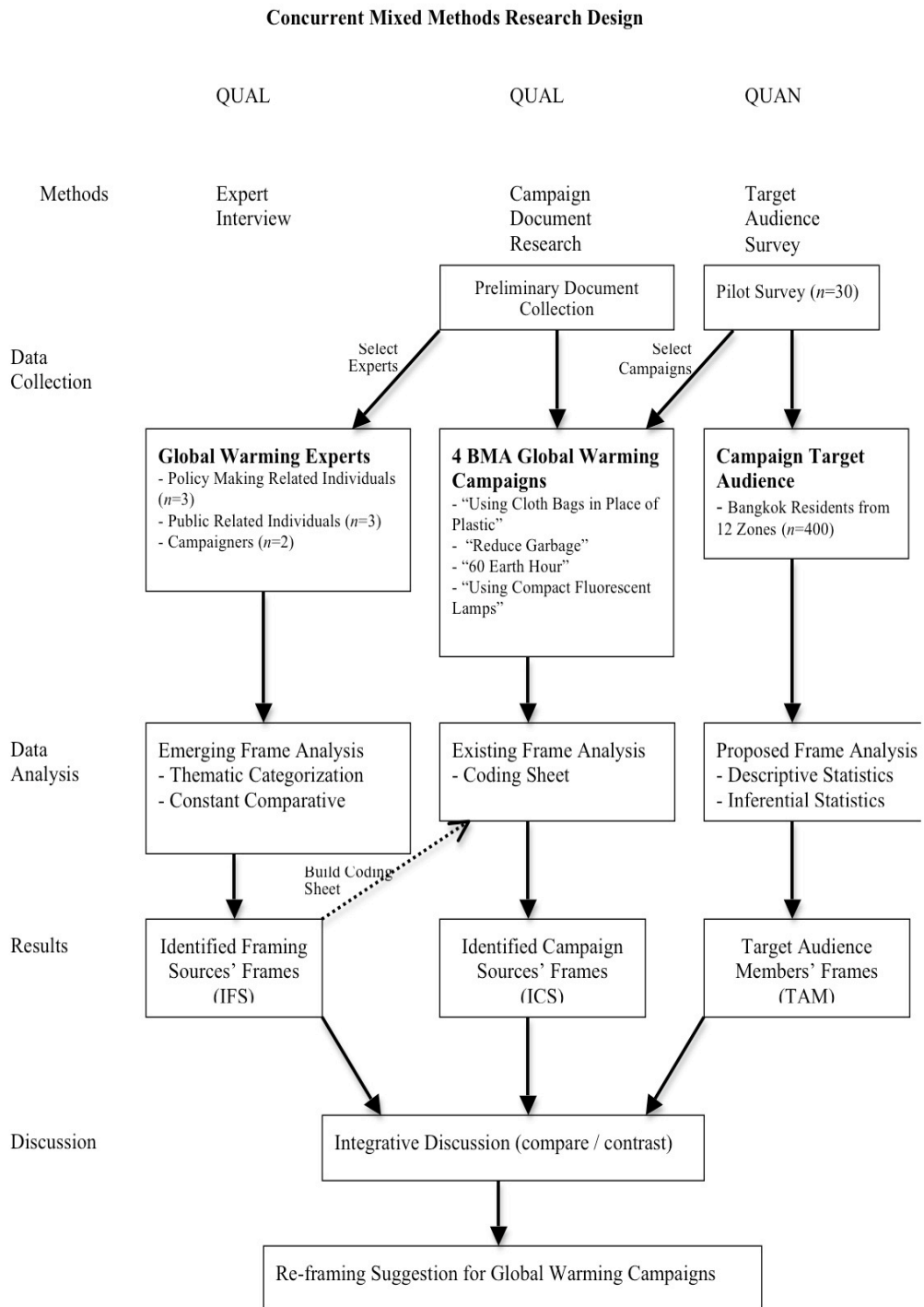
interviews in Bangkok. The questionnaire was distributed to Bangkok residents based on geographical zone. The research obtained the Human Ethics Approval Letter before initiating any human research. Finally, all participants received the consent letters or adequate information on their rights to participate in this research.

The Table 2 below shows the research questions and methods used in this research. The next flowchart is the research design flowchart.

Table 2 Research Questions and Methods Used

Research Objectives	Research Questions	Methodological Approach	Research Methods	Research Outputs
a. To identify campaign framing sources	1. What were the private frames on global warming in Thailand?	Qualitative inductive approach	In-depth with experts from political, social and cultural sectors	Experts' Frames
b. To identify BMA's construction of campaign frames	2. What were the mediated frames portrayed in the BMA campaign on global warming in Thailand?	Qualitative inductive approach	Content analysis with thematic categorization	Campaign Frames
c. To identify mediated global warming frames before and after the campaigns	3. What were the global warming frames in the minds of target audience members before and after the campaign	Quantitative deductive approach	Questionnaire	Target Audience Members' Frames
d. To compare a., b., and c.	4. What are the relationships among the expert private frames, the campaign frames on global warming and the target audience members' frames in Thailand?	Qualitative inductive approach	Comparison	Consistency of Frames
e. To find out suggestions for re-framing global warming in campaigns and the media	5. What should be the frames used in global warming campaign in Thailand?	Qualitative inductive approach	Frequency and saliency frames found	Common and Uncommon frames

Figure 7 Research Design Flow



3. Research Protocols

There were four major research phases in this study. The first was the interview of the experts, campaign makers and journalists who are active contributors to the global warming issue in Thailand. They were identified from selected media coverage and materials. The second was the textual analysis of the campaign and related media. After identifying the frame from both variables, the survey was developed for the target public. After collecting these data, an analysis of the relationships was conducted at the final phase of this research including the relationships among private frames, campaign frame and target audience frame.

Even though framing analysis has been conducted within the realm of communication studies, most of the research has applied linguistic devices to measure frames (Devereux, 2007). However, when it comes to communicating global warming, particularly with campaigns, the main element of study cannot solely rely on the texts of news articles. In fact, not only do the campaign communicative executions include printed and recorded texts from the controlled media such as brochures or organizational manuals, but they also cover the news coverage and the feedback from other organizations in the uncontrolled media such as the television news or other corporate magazines. Therefore, this research attempts to collect the data from all elements of the communication process including the communicators, the campaign texts and the target public. Different methods have different units of analysis to better answer the research questions. Each method of in-depth interviews, document analysis and survey is discussed below

3.1 Preliminary Document Collections and Pilot Survey

Two preliminary research activities were conducted prior to this thesis project. The first was the collection of printed material from mass media such as books, magazines, and news. The materials were used to analyse the global warming network in Bangkok (Chongkolrattanaporn, 2009). From more than 20 books and 50 news articles, some of the key experts were identified and chosen to be interviewees for the in-depth interviews. These experts were either the authors themselves or the sources referred to by the publication. Moreover, from this preliminary study, the documents were screened for BMA campaign materials to be used in the textual analysis phase.

A pilot survey was also conducted to test the validity and reliability of the questionnaire measurement. There were a total of 30 participants – 10 were communication scholars and 20 Bangkok residents with different backgrounds. To test the validity, the respondents were asked to make some comments on the survey layout, word choice and sentence formation. They were allowed to write on the questionnaire and make any corrections to make the questionnaire more valid for use with a bigger sample, particularly among Thais. All 30 questionnaires were returned. The reported preliminary survey showed that several features had to be changed such as the visual aids for campaign recognition, the layout of frames before and after the campaigns and some translations in language that did not make sense to them. Moreover, a test of reliability was carried out to test the questions' reliability according to the respondents' answers. After applying Cronbach's Alpha formula, it turned out that to reach a level closer to 1, 6 out of 22 questions needed to be deleted. The pilot survey also indicated that the respondents mostly recognized only four BMA global warming campaigns. As a

result, these campaigns were included in the final version of the survey as well as the materials, which are included in the content analysis part.

3.2 In-depth Interviews

In order to identify the frames existing among communicators, in-depth interviews, with semi-structured questions, were employed. The list of questions was attached together with the consent form for the interview. The participants included governmental officials such as the campaign's responsible officials, and global warming experts from organizations mainly relevant to the issue in Thailand. The interview questions were divided into four major sections. The first set focused on the individual view of global warming. In the second part, the experts were asked about their thinking on how the other experts frame the issue as well as the public's frames. The third section included how the public should frame the issue to bring about an effective solution. Lastly, the questions concentrated on the global warming campaign of BMA and the suggestions for future governmental action. In approaching these key informants, the researcher contacted them first by telephone via their assistants. An official letter of consent, on university headed paper, was delivered and consent obtained prior to the interviews being conducted. Potential participants were assured that they were under no obligation to participate and could opt out at any time for any reason. They were also consulted about the proposed use of audio recording and advised concerning the way in which their confidentiality would be respected as outlined in the attached letter.

3.2.1 Data Sources

The interview consisted of eight individuals involved with the BMA campaigns. They are considered to be global warming experts with their works contributing to the issue, such as through their writings, their public interviews, and their presentations. These people were preliminarily identified from printed documents on global warming such as magazine articles, books, news articles and conference reports (Chongkolrattanaporn, 2009). The name list was then used to identify the relationships with the BMA global warming campaigns. They were categorized based on their association with the BMA campaigns into three main groups: the campaigners (e.g. the director of the Environmental Department), the social-related individuals (e.g. environmental journalists, environmentalists), and members of the policy community (e.g. the policy makers, the climate change experts).

3.2.2 Data Sampling

For the interview, the key informants were those involved with the BMA global warming campaigns. The snowball technique was applied to sort out the relevant individuals. BMA publications were analysed to identify potential key informants.

As some interviewees were high-ranking officers, a co-investigator approached them through these officers' assistants. Telephone calls were made first and followed up by an official letter with university letterhead. As the snowball technique was used, the referring person was identified as such. The co-investigator also prepared a name card and a brief summary of the project in case their credentials were required. Interviewees were told about the consent form and this was explained to them. They were invited to read and, if they agreed to the research, sign and return a copy of the form.

For the interview, some of the key informants were members of governmental units such as the Bangkok Metropolitan Administration. The Director of the organization concerned was approached in order to obtain consent to conduct interviews with staff members which was also attached to this application.

3.2.3 Research Procedures

Step 1: Identify key informants

This process was achieved through the literature review of Thai global warming discourses and global warming campaigns in Thailand. From the preliminary document research in which the researcher collected and read the publications concerning the global warming issue in Thailand, ranging from local pamphlets to national annual reports and from bookstore books to academic reviews, three major segments of framing sources of campaigns were identified: political-related individuals, social-related individuals and campaign makers. The first group covered policy makers and the governmental officials working in the responsible ministries such as the Ministry of Natural Resources and Environment and the Ministry of Energy. The second group referred to those working in the media and non-governmental organizations directly involved with the global warming issue in Thailand. The last segment comprised the individuals in charge of creating global warming campaigns, particularly from the Bangkok Metropolitan Administration. The campaign partners of BMA were also identified for deeper insight into campaign frames such as business organizations and international organizations related to the global warming issue in Thailand.

There is no perfect amount of key informants from each segment according to the qualitative way of sampling as each individual should be able to contain sufficient

rich and descriptive information. However, setting the number from each group is useful for data collection completion rather than having a number that would lead to never-ending research. Therefore, five people were identified for each group. The total number was 15. There was the prospect of difficulties in reaching some key informants as they could be occupied with their daily work. The minimum number was set at least two to three people representing each segment.

Step 2: Create semi-structured interview questions

In semi-structured qualitative research, the background information gained from the literature review on the topic and the research questions leads to how to prepare the interview guide or protocol to acquire the specific data collected from the informants (Weerakkody, 2009). Therefore, after identifying the informants for interview, the questions were created based on the preliminary document research as well as framing theory methodology. Based on Entman's (1993) definition of framing, four potential outcomes were identified: defining problems, identifying causes, making moral judgments, and suggesting solutions. Moreover, since the process of framing is participatory communication (Reese, 2003), it is essential to ask the interviewees about the dynamics of frames among other involved stakeholders.

The questions can be divided into four main sections: 1) Experts' Private Frames (e.g. What comes to mind when hearing the phrase 'global warming?', What do you think could be the best solution for Thailand? Particularly for Bangkok?); 2) Experts' Views of Other Experts' Frames (e.g. What do other experts think about this issue? Particularly governmental units?, Why do you agree or disagree with the way they think?); 3) Experts' Views of the Public's Frames (e.g. How does the Thai public think about this

issue?, How do people from different provinces have different views?, How should the Thai public view this issue? How should they act?); and 4) Experts' Views of Global Warming Campaign (e.g. What could be the best way to communicate to Thais especially Bangkok residents about this issue? How should the issue be presented to the public if the present representation does not work?).

Step 3: Approach key informants

In approaching the key informants, the researcher conducted a mini profile research of each individual. The profile covered their previous works and experience in the global warming issue in Thailand as well as their contact information. Most of the details could be retrieved through the Internet. Another way to approach them was through referrals from other informants. Some informants suggested other informants as they had worked together within this subject matter. They were then reached via e-mail, fax and telephone. In most of the cases, the connections were made through their secretaries or assistants. The appointments were made at their convenience with their choice of location. The availability and time constraints of the data collection process proved major difficulties in reaching these informants. Due to the conflicts of schedule between the researcher and the informants, some of the interviews were done via e-mail and chat programs such as Skype and MSN.

Step 4: Conduct interviews

After receiving their consent for the interview (the form is attached in the Appendix both in a Thai and an English version), the interview was conducted under the conditions proposed by the informants such as the locations, dates and times, and formality of the interview. The interview took approximately 30 to 40 minutes. The

researcher used both an audio recorder and short notes to record their answers as well as to guide the probing questions.

Step 5: Transcribe interview records using NVivo 9

The researcher transcribed the recorded files with the NVivo 9 program. The program can facilitate the tracking and analysing process. The audio file was first transcribed ad verbatim. The answers of interviewees were divided into four main sections in accordance with the question structure.

Step 6: Code the interview transcriptions

Open coding was applied to first familiarize the researcher to the collected data. The open coding revealed the first order codes focusing on the participants' description of their views on global warming in Thailand, their views on other experts' views, their views on the public views of global warming in Thailand and their suggestions for global warming campaigns in Bangkok. The researcher, then, reanalysed the coded data with broader axial coding applying the constant comparative methods to compare and contrast the emerging themes. This process then leads to the data reduction where thematic categories will reveal the global frames existing among the experts representing different sectors in Thailand.

Step 7: Analyse the coding

The thematic categories drawn from the coding process were related back to the framing sources. Each frame category was checked for their frequency and saliency. The profile of the experts was used to consider the consistency of their involvement in the global warming issue and their frames presented in their interview.

The results were employed as guidelines to building a coding sheet for another method – that of campaign frame analysis. The major frames found from the interviews work as the main category to group together the campaign frame elements.

3.2.4 Data Collection

The interview was recorded with notes and an MP3 audio recorder with the interviewee informed of his or her rights under the Human Ethics protocol. They also had access to copies of the recording if they so wished.

3.2.5 Data Analysis

Global Warming Frames Emerging from Categories and Codes

Even though there has been numerous research works on global warming frames providing the generic frames of climate change (Nisbet, 2009; Shanahan, 2009; Good, 2008)) and specific frames of apocalyptic global warming (Foust, 2008; Foust and Murphy, 2009) the first analysis part of this research applied inductive reasoning to manage the data. This is when the one refers to a principle from any particulars of discourse or action (Lindlof and Taylor, 2007). This enhances the chance of discovering the unidentified frames in the literature. The researcher, however, taking an emic stance as a part of global warming scholars, was influenced by previous global warming works as to how she read the transcriptions of other experts. Thus, it is worth noting that categories and codes identified in this analysis phase are somehow related to previous emerging frames reviewed in the framing theory chapter. Open coding and in vivo coding were applied to read the texts and also between the lines from the interview transcriptions. This can also be achieved by the researcher's asides or commentary made before, during and after the interview. As the interviewer herself, the researcher

recalled her memory and experience with a particular interview when she listened to the audio recording over and over again.

After the coded data were available, the researcher reanalysed them to reveal the themes occurring within these codes. The process of data reduction helped the researcher to categorize the different framing codes. This is also known as the thematic categorization process. Implementing the thematic analysis necessitated a close reading of participants' responses. These responses were then organized into coherent themes or categories (Stenner, 1993). Researchers discussed the properties or characteristics of thematic categories to be sure responses fit in appropriately. Thematic categories were also "ranked" according to the frequency with which responses occurred in each category. This procedure was essential to highlighting the problems experts perceived as most important.

3.2.6 Tools for Analysis

The researcher used computer-assisted qualitative data analysis software called NVivo 9 to help with data management. The program helped to track the transcriptions, to make some comments and to create the categorization.

3.2.7 Data Report

Applying the NVivo 9 program, the data could be reported in the form of attributes and network models. This could reveal the frames emerging in the Identified Framing Sources (IFS). The visual report revealed the frames as well as their relations to the IFS. The report also included the basic descriptive details of each frame. The format was similar to those used in statistical reports because this set of data was used for integrative analysis in the final part of research. The data was compared with the SPSS

report to find the relationships among the frames of IFS, frames from Identified Campaign Sources (ICS) and Target Audience Members (TAM).

3.3 Document Analysis

This part of the research is quantitative-based as the coding sheets were developed from the previous literature as well as the results found from expert interviews. This is also known as the deductive way of knowing the truth. The focus of this thesis is on the global warming campaigns developed by the Bangkok Metropolitan Administration – the responsible organization for policy and civil practices. In order to identify the framing devices offered by Gamson and Modigliani (1989) including metaphors, historical lessons, catchphrases, depictions, and visual images, the researcher collected the campaigns' communicative executions as distributed by the BMA between 2007-2010 from the organization's resource department as well as the responsible officials. The selection criteria included the main objective of that particular tool. For example, if the main purpose of the brochure was to inform the public about global warming, the texts were included. However, if the main purpose of the brochure was to run a campaign for election, despite the small mention of global warming, this type of material was not chosen. This is due to the major objective of the study being to examine the global warming campaign materials used in BMA environmental campaigns. Another condition was the main theme of the material. The core message of the entire campaign tool should be on global warming rather than an environmentally friendly theme in general.

Even though framing analysis has been conducted within the realm of communication studies, most of the research has applied linguistic devices to measure

frames. However, when it comes to communicating global warming, particularly with campaigns, the main element of the study cannot solely rely on the text of news articles. In fact, not only do the campaign communicative executions include printed and recorded texts from the controlled media such as brochures or organizational manuals, but they also cover the news coverage and the feedback from other organizations in uncontrolled media such as the television news or other corporate magazines.

3.3.1 Data Sources

The sources of data were the campaign documents published by the BMA and its networks during 2007-2010. The primary sources were printing materials including annual reports, brochures, pamphlets, BMA news releases and manuals. The secondary sources included clippings from different media such as newspapers and magazines that mentioned campaigns as the major content. This could be retrieved through the hard copy and the online version depending on the availability of the documents and access. Audio and video files were not included due to the lack of recordings and data collection time constraints. The printing materials were sufficient for the framing study. The documents had to be freely accessible by the public and contain no confidential information not approved by the involved organizations and persons. The data was saved as hard copy or soft file for analysis.

3.3.2 Data Sampling

There were 15 campaign projects run by the BMA during 2007-2010. The documents from each project were selected from both primary and secondary sources. The documents contained enough information from the campaign project including title, key messages, participants, activities, date and location. The materials could be both in

Thai and English. The data had to be freely available to Bangkok residents. There were at least two documents for each project.

3.3.3 Research Procedure

Step 1: Preliminary Document Collection

The researcher started collecting any materials related to BMA global warming projects. Most of them were printed documents such as news releases, news articles, pamphlets, and manuals. This gathering of materials was done through library searches and online browsing. Moreover, the BMA Climate Change Assessment Report provides a list of campaign projects developed during 2007-2010. The materials were grouped by their project relations.

Step 2: Selection of Texts to Study / Set Criteria

After the pilot survey, a significant amount of respondents (more than 50% out of $n=30$) had reported remembering 4 campaign projects out of 15. Therefore, only the materials from these 4 global warming campaign projects from BMA were used for frame analysis.

Step 3: Collect Primary Documents from BMA

Contact BMA officials to collect more campaign documents from BMA.

Step 4: Collect Mediated Documents from Media

Step 5: Coding Sheets and Thematic Categorization

The coding sheet was developed from the previous literature on public relations frames (Hallahan, 1999) and the results or global warming frames found from expert interviews. The table is shown below. The sheet was used for each campaign project.

Step 6: Content Analysis

The framing elements from each material were identified including metaphors, historical lessons, catchphrases, depictions and visual images. Each element was categorized into the coding sheet based on their meaning. One coding sheet was used for one project to see the frequency of frames presented. The coding sheet was also open for emerging themes. From the analysis of the four campaign frames, the data was then compared to identify the dominant frames, the secondary frames and the uncommon but noteworthy frames mainly according to the frequency.

Step 7: Document Analysis Report

The data was organized first within each campaign project to see the main frames found from the framing elements. Then the overall frames from the BMA campaign materials were reported.

3.3.4 Data collection

There were two parts to document collection: BMA documents and mediated global warming campaign information. For the former, the researcher first contacted the BMA officials responsible for the global warming campaign projects. The consent letter issued by Macquarie University and Chulalongkorn University was sent to them for further research details as well as in compliance with their required consent. Since most of the projects had already finished, the materials were kept in the BMA office where the researcher had to travel to meet the officials in charge and to ask for permission to use the documents in the research. For the latter, the researcher used both library and internet searches with the keywords 'global warming' 'BMA' 'campaign' to find the relevant documents for the BMA campaign projects.

3.3.5 Data Analysis

Previously, framing theorists used news stories or news articles to be the unit of analysis (D'Angelo, 2003). In fact, the initial studies of framing used words or vocabulary as the building blocks of the frame (Entman, 1993). From words, some scholars use the paragraphs of news articles as the units of analysis by measuring the structural dimensions of the frame, including: syntax, script, theme and rhetoric (Pan & Kosicki, 1993). Others use the whole article of news to analyse the frames by using the computer-assisted approach to identify the frame mapping (Miller, 1997). Basically, these approaches are based on the inductive or hermeneutic lens that relies heavily on researchers' judgments leading to the problem of validity as well as the reliability of frames analysis (Mattes and Hohring, 2008).

In contrast, deductive approach attempts have been made in framing studies, particularly among communication scholars. Basically, the researcher tries to theoretically derive frames from the literature and code them in standard content analysis (de Vreese, Peter and Smetko, 2001). Elaborating from the postulated generic frames, the researchers analyse news stories through asking a series of yes-no questions (Semetko and Valkenburg, 2000). However, with this method, the discovery of frames is enhanced while the newly emerging frames are hindered (Mattes and Hohring, 2008).

After collecting the documents, the researcher identified what had been framed in the materials based on "Seven Models of Framing Applicable to Public Relations" by Hallahan, 1999. From this public relations perspective, certain issues are framed in different ways depending on the focus of the issue. These frames include the situations, attributes, choices, actions, issues, responsibility and news. Each material was

categorized into these different frames by applying a series of questions drawn from the descriptions of each frame. The questions included, "Is there any presentation of the relationships between individuals in situations found in everyday life?" The unit of analysis was the whole material because when it comes to public relations material, there is only one major theme or core message presented in the tool. The established method of asking a series of questions can work as the deductive validity and reliability of this procedure.

Each material was then coded from its global warming theme based on the frames provided by Nisbet (2009) drawn from the ideas of how science-related issues are defined. This typology of frames was designed for examining news coverage related to climate change after reviewing the previous frame studies (e.g. Gamson and Modigliani, 1989; Dahinden, 2002; Durant, Bauer, and Gaskell, 1989; Nisbet and Lewenstein, 2002; Nisbet, 2009). This helped to reveal how global warming is framed in campaign documents developed by the BMA. These frames were also analysed with other analyses of other sources of frames.

3.3.6 Data Report

The data was reported in the form of descriptive frames categorized by their saliency and frequency. The keywords and visual images used for the different frames found were organised and presented in table form.

3.4 Survey

Another research purpose was to find the relationship between the frames existing before and after the global warming campaigns in the target public. The respondents were Bangkok residents who had heard about or experienced the global

warming campaigns of BMA. A screening question was provided at the beginning of the questionnaire. The next section examined perceptions of the global warming issue and included questions about their views on the definition, cause and effects of global warming and the potential solutions through actions. The third section focused on global warming campaigns including the frames held by respondents before and after the campaign. This part also included questions about information-seeking behaviours, and their expectations in relation to global warming campaigns. Finally, the participants were requested to provide their demographic profile including age, gender, income, profession and also their commuting behaviours. This questionnaire was designed for them to recall their experience. This was a self-reporting process and respondents were kept well informed about their consent and rights.

3.4.1 Data Sources

The target public members residing the Bangkok zone were the main sources of the data. They must have previously encountered the global warming campaigns of BMA. Thus, a question to see if they knew of the campaigns would be the screening question. These citizens were approached in public areas where they had enough space to provide consent to participating in the survey process. Their demographic profiles, such as sex, age, education, occupation and income, were not the criteria. Even though the participants were originally from different provinces, those who had stayed in Bangkok long enough to know of the campaigns were included.

The questionnaire was designed to reveal the frames that respondents held using self-recalling and self-reporting processes. To ensure the recognition of the campaign, a screening question was posted at the beginning of the questionnaire

asking whether the respondents had heard of any of the BMA global warming campaigns. In addition, photos and messages from each campaign were attached to help respondents recall. The questions were developed based on the previous literature on climate change frames (Malone 2009; Nisbet 2009; Shanahan 2007). They are trisected into: 1) scientific³, 2) political and economic⁴, and 3) social and cultural⁵ frames. The questionnaire organization and outline were designed to help respondents recall the campaigns and to compare their frames before and after exposure to the BMA campaigns. The 16 questions were in the Likert-scale format ranging from 1 (totally agree) to 5 (totally disagree). The participants were also required to fill in their demographic profile.

3.4.2 Data Sampling

Bangkok residents were sampled as representatives of the BMA's target audience. The sampling of Bangkok residents was based on the geographical segmentation. BMA has divided Bangkok into 12 zones according to space utilisation and development plans – including financial, industrial, and old city zones as shown in Figure 1 (Department of City Planning 2005). The map below shows the different zones of Bangkok separated by economic growth and spatial geography. To yield a significant level of confidence from the sampling size, there should be at least 400 respondents within a study. Thus, approximately 30 respondents were purposively chosen from each zone.

³ e.g. global warming is the extreme change in weather in different areas; global warming causes melting ice in the North Pole.

⁴ e.g. global warming is not only a problem for developed countries but also Thailand; industrial development is the main cause of global warming.

⁵ e.g. global warming reflects the circle of karma made by human beings; everyday activities contribute to the cause of global warming.

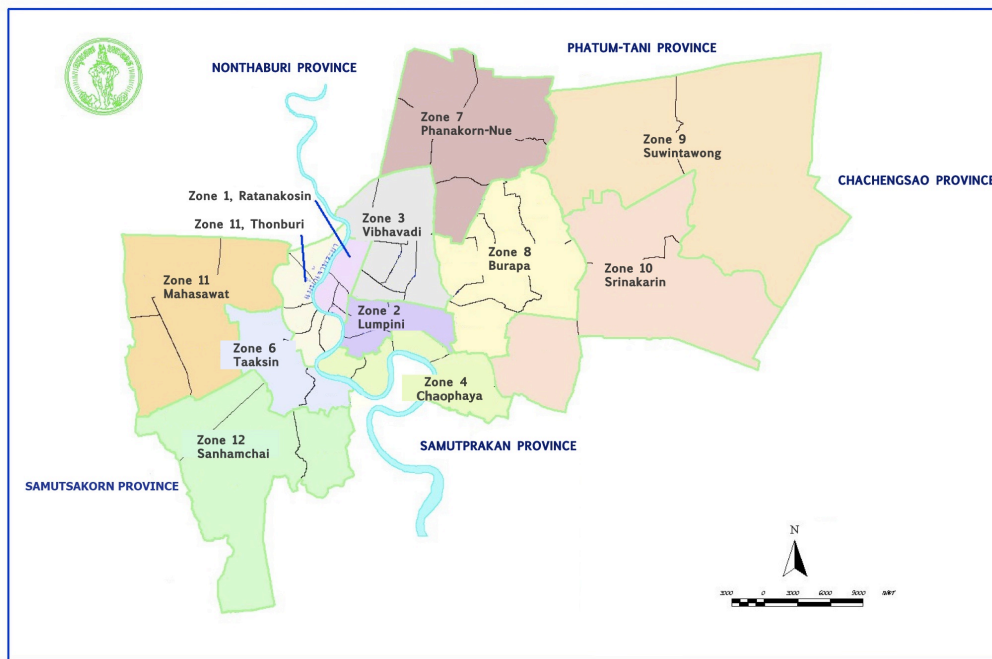


Figure 9 Bangkok City Zones for Sampling

3.4.3 Research Procedure

Step 1: Create the Questionnaire

Step 2: Conduct Pilot Test of the Measurement for Reliability and Validity

Step 3: Identify the Criteria for Respondents and Questionnaire Completion

Step 4: Distribute and Collect the Questionnaires

Step 5: Code SPSS Data

Step 6: Use Statistical Formula for Data Analysis

Step 7: Report the Descriptive and Inferential Statistics

3.4.4 Data Collection

A questionnaire was distributed face-to-face at public venues such as department stores and public parks allowing for voluntary survey completion. A Human Ethics consent form was first provided. However, due to the limited time available of

participants, the distributor briefly read the consent form to prospective participants explaining that voluntary completion of the survey would be proof of consent. Quota sampling was used to collect data from respondents based on city zoning.

3.4.5 Data Analysis

Statistical analysis tools from SPSS version 17 were used to both record and analyse the data. The descriptive data mainly included mean, min, max and standard deviation. The inferential data included T-Test and ANOVA to find the correlations among variables. The significant level was set prior to analysis.

3.4.6 Data Report

The data was reported in the form of statistical results. The number was provided as well as the explanations for the correlations.

Summary

A mixed method research approach was conducted to collect the data. Framing analysis was also used to analyse and report the data found from global warming experts, the campaign materials and the target audience members. The next three chapters will report the findings as found for each element respectively.

CHAPTER IV

RESULTS

5.1 GLOBAL WARMING EXPERTS' FRAMES

Introduction

As this study has taken a constructivist approach (Pan and Kosicki, 1993), the individual cognitive process is valued. Thus, this chapter examines the global warming experts' insights through semi-structural in-depth interviews. These individuals are considered key informants in this subject matter as well as sources of knowledge as they are often cited or mentioned in the popular media in Thailand. The preliminary study also showed that they are somewhat associated with the global warming campaigns of BMA as immediate stakeholders or indirect sources of information.

This chapter identifies the frames existing in experts' perceptions from the in-depth interviews about the global warming issue in Thailand. The unit of analysis is the interviewees themselves. Each person is drawn from different relevant sectors. Therefore, their standpoints and their roles can have an influence on how they see this matter. From the qualitative content analysis, the findings showed that there were three frames emerging from the interviews. By using the constant comparative technique (Van Gorp, 2010), the researcher was able to see the pattern of how the key informants describe the global warming issue, its causes, its effects, and its solutions. The frames identified by the global warming experts in Thailand do not differ from those identified by previous literature (Malone, 2009; Nisbet, 2009) particularly scientific-related frames.

However, there is an emergent but not so salient frame that can be seen particularly in the Thai context where the dominant traditional values include Buddhism and the King's Philosophy of sufficiency economy. This chapter will lead to the analysis of the campaign text in the next chapter. The coding sheet developed from the open coding will be applied for the document analysis.

The report on the findings starts with the qualitative methods used to analyse the interview transcripts. NVivo program was employed to achieve the study purposes. These findings will answer the RQ 1:What were the private frames on global warming in Thailand? The sub-questions are listed below:

- 1.1 What were the private frames of the expert him or herself?
- 1.2 What in the expert's view were the private frames of individuals belonging to professional groups in various sectors?
- 1.3 What were the private frames of campaigners (e.g. BMA officials, BMA consultants)?
- 1.4 What were the mediated frames in the views of the experts?
- 1.5 How should global warming be re-framed in Thailand?

The outline of this chapter is organized based on the research questions that also guided the semi-structured interview questions. Within each research question, different frames are used in the interviewees' answers. There is, however, differences in the selection of words as well as the way they talk about the issue. The discussion of their roles and their frames is discussed in the final part of this chapter. This will lead to the analysis of the documents in the next chapter.

It must be noted here that for the qualitative analysis of the interview transcripts, it is difficult to take research subjectivity out of the interpretation. In fact, qualitative research does not put much focus on the reliability but rather the validity of the data based on the richness and depth of information (Berger, 2000). However, to create the validity of the interpretation, the researcher will also use their publication or works to identify any discrepancies. Moreover, as the interviewer and interpreter herself, the questions she posed as well as the frames she used for analysis could have an influence on how she sees the data. The researcher can also be seen as another expert in the field because she has been working on the topic for more than two years. In this case, she could be seen as another influential factor in the interpretation of the data as well as the data report. The researcher's major is communication, and so when she asked the questions she always led back to the communication perspective. This could have obstructed the interviewees from actually expressing their opinions on the global warming issue in Thailand. Moreover, some of the researcher's questions emerging from the semi-structured interview could be seen as leading questions. She kept asking and leading the interviewees to think about the association between the global warming issue and other Thai values which some of the key informants had not previously considered. One of the interviewees (Interview 1) even remarked to her that the way she carefully designed her research could lead her to a certain way for making an argument. The researcher is aware of this drawback of this subjective element. Therefore, the coding sheet developed from this chapter is used to check the reliability and validity in the next chapter when analysing campaign texts.

1. Global Warming Experts' Roles

The interview questions included the experts' views on their own roles and those of other experts in communicating the global warming issue in Thailand. The themes included their own roles and responsibilities, and those of others.

The responsibility issue was raised when inquiring about their roles in the issue including how broad and long an approach they should take in taking responsibility for the issue. An expert could play different roles in this matter. For example, one of them (Interview 2) made an analogy to wearing different hats. One role that most of them associate with is that of knowledge provider (Interviews 1, 2, 3, 5 and 6). This includes the knowledge of science and policy including mitigation and adaptation. As a consequence, they are in a position to distribute this knowledge to others, especially to lay people, because "global warming is a matter of mass not lab" (Interview 2). The role in communicating this issue is not restricted to only social opinion leaders nor environmental journalists, but it also applies to those working with the governments and international organizations (Interview 4). One way to distribute the information is through the use of media and pushing the issue to become salient and easy for anyone to understand and grab its essence (Interview 3). This can be done by making the information easier for lay people to comprehend through the use of info-graphics and visualization (Interview 5). Al Gore and his movie, *An Inconvenient Truth* was referred to as taking a good role in taking action on global warming (Interviews 3 and 5). The importance of this role is to connect the information with the audience by providing simpler, non-technical information and focusing on the easy solutions first rather than the real hard problems and causes (Interviews 5 and 6). Another step in this role of

knowledge provider is putting oneself on the public stage and becomes the public reference source (Interview 6). From the media perspective, when it comes to communicating global warming, they need to take it seriously and on a longer-term basis rather than go with the flow of an entertaining fad (Interview 6).

Another perceived role is that of being a dialogue manager among the different organizations involved in this matter (Interviews 4 and 7). This is when the persons and their organizations prepare the opportunities for the different sectors to interact and share information. They also have to manage the financial and knowledge resources to ensure the best outcome expected by the funding sources (Interviews 4 and 7). The dialogues can take place on the international level or a local one. For example, a person who works with an international organization has to deal with people from the regional quarters and local governments to achieve mutual goals. One also has to do fieldwork and communicate this issue to local people who may not have any formal knowledge on the issue. Thus, one has to bear in mind the expectations from the global experts and the local capacity to deal with the issue (Interview 4). Being a dialogue manager means helping the conversation on global warming continue on a multitude of different levels.

Apart from discussing their own roles, they also talked about their responsibilities. One critical problem in Thailand is that the responsibilities are inappropriately assigned to the wrong places with the wrong people (Interviews 2 and 5). This is a problem that concerns self-perceived roles and other-perceived roles. For example, one interviewee who is described as an expert in global warming from the scientific field by several media (Interview 2) sees himself as communicator rather than researcher. Even though he has been labelled as “popular global warming scientist”

(Interviews 3 and 5), he reported his focus as being on how to communicate to the public about this matter (Interview 2). As a result, he always accepts invitations by different media outlets to talk about global warming. Taking a public role in the global warming issue may differ from the roles assigned by work title and position. In sum, the problem of responsibility at the individual level is the discrepancy between self-perceived roles and other-perceived roles.

The scope of responsibility has been raised to discuss how much one should cover of the global warming issue. For example, at the international level, as one interviewee (Interview 2) mentioned, each country coming together at climate change conferences is supposed to cooperate in agreeing on the ultimate mutual understanding to reach the best-for-all outcomes. However, in reality, the occasion becomes an arena for “bullying action” (Interview 2). International organizations are perceived as being part of a conspiracy applying pressure on developing countries. This provides space for negotiation rather than cooperation. Thus, every country prepares to negotiate for their own sake before true global cooperation. What they need to do to lose the least and gain the most. The protocol in fact takes advantage of human goodwill and social responsibility. The net result is social injustice in climate change politics (Interview 5). The oil companies enjoy the protocols as they can postpone the use of alternative fuel resources. The established international organizations aiming to handle the global warming do not seem to make sufficient efforts (Interviews 1, 2, 5, and 6).

When it comes to local politics, too little responsibility has been given to those who have more access to resources to handle the global warming issue. This is when one underestimates the ability of other organizations (Interviews 1, 2, 4, and 5).

Moreover, the issue should have become the responsibility of every citizen (Interviews 4, and 5). Citizens should be encouraged to be more active but the current trend of global warming communication in Thailand seems to be keeping the citizens passive and waiting for orders from the authorities (Interview 5). Thai governments from the national to the local level should make it easier not harder (Interview 1). The top-down strategy might not work anymore – people should be engaged in the thinking process rather than being passive and waiting for governmental instructions (Interview 5).

When responsibility becomes an assignment rather than an everyday civil duty, some organizations do not realize the importance of their own role in the issue. This leads to the lack of responsible organizations to carry on the issue and its relevant projects (Interviews 1, 2, and 6). For example, government officials view the media as mass communicators but they should actually also think of themselves as one. There is always blame game running through the discussion. The lack of clarity in role description and responsibility scope leads to the duplication of work and mal-adaptation with no coordination (Interview 2). Even though there are many official working groups related to the issue, they do not appear to collaborate much – only in the form of occasional seminars and conferences (Interviews 2, and 7). Long-term projects are barely evident despite the global warming's empirical long-term effects (Interview 7). Moreover, there are only a few individuals capable enough of communicating the complexity of the global warming issue to the lay people. Training workshops and academic courses should be made available to train those individuals talented in communication now to cope with the future consequences (Interviews 3, and 5).

2. Global Warming Experts' Frames

In order to answer research question 1, the following section first reports on the findings from the five interview questions. The frames were drawn from the interviewees' answers and grouped into similar themes. Each question demonstrates what frames are used by the participants to discuss global warming. As the issue has different angles to it, the participants use different frames to talk about it. Lastly, RQ1 is answered based on the frames found from the interviews. Frames are divided based on their frequency and saliency into three main categories: dominant, secondary and uncommon but noteworthy.

2.1 Interview Question 1.1: What were the private frames of the expert himself or herself?

In the first section of the interview session, the key informants were asked about their opinions on global warming in Thailand. This is when they describe the issue's definitions, causes, effects, responses and solutions. According to Entman (1993), framing can be recognized from how problems are defined, causes are diagnosed, moral judgments are made and remedies are suggested (p. 52). Therefore, the interviewees' answers were coded into these four major categories to see which frames they use to communicate the global warming issue. There are three main frames mentioned, namely 1) global warming as an environmental issue, 2) global warming as a social issue, and 3) global warming as a controversial issue. Within each frame, the themes and the words used are provided to clarify and verify the emerging frames.

Global Warming as an Environmental Issue: This is the most frequent frame used to describe global warming. Almost all the interviewees mentioned global warming as

environment-related issue, except one. As an environmental issue, global warming should be treated as one. The problems include the extreme changes in weather, the rising temperatures and other environmental problems as consequences of global warming. Specifically in Bangkok, those who apply this frame talk about flooding and heat. Terms such as 'the most serious environmental problem' and 'the urgent environmental issue' (translated by the researcher) are used to identify the issue.

Within this frame, the cause used to identify global warming is human induction. In other words, the blame is put on the human beings. None of the interviewees mentioned causes by natural events arising from the evolution of Earth. Within this frame, global warming is the result of how people release too much greenhouse gases and cause the rises in temperature. The causes of the problem also include developed countries who have historically created more greenhouse gases than Thailand. In terms of geographic specificity, global warming is caused mostly by urban areas where there are huge amounts of transportation and industrialization. From the views of the experts who apply this frame, individuals belong to a consumerist society in which human beings exploit the environment through excessive consumption.

The solutions, as a result, are also those associated with environmental conservation and friendly behaviours. This is epitomised by when the interviewees talk about how people know about the issue but do not really take any actions. They also mentioned the fad of using cloth bags and the use of 'global warming' as a buzzword. Moreover, most of the experts asserted that central government should be responsible for the solution. The government should first understand the issue and communicate it to the lay people in the right direction. As they have both the resources and power, as one

interviewee mentioned, they should do the real hard work to justify their position. Unfortunately, nothing has been developed much from the governmental level. One interviewee made the analogy that they use 'deodorant' to cover the 'bad smell' of the issue. Another also said that they knew but that they are more comfortable now knowing about it but acting as if they didn't. The responsible ministries, such as the Ministry of Natural Resources and Environment, have been active but still not enough has been done to tackle the problem.

The remedies they suggest for this frame is to protect nature and make it better for the future. This can be done through reinforcing the law and regulations as well as communicating to the public what to do.

The term climate change has been rarely used to talk about the issue. Only three interviewees defined global warming as climate change. When referred back to the issue, all of them used the word 'global warming' in their discussion.

Global Warming as a Social Issue: This is when the interviewees describe the issue in terms of a problem of society rather than an environmental one. They also associate global warming problem with social injustice where people do not have equal access to knowledge. Global warming is framed as a problem of human greed. People need to overuse the resources to satisfy themselves. Only one of the experts repeated this frame throughout the interview while the others only mentioned it slightly in parts of their interviews.

The problem of global warming is not with the environment but society – where people think they can control nature and one another (Interview 2). This is when the access to the knowledge becomes unbalanced. Concerning this frame, there is a need

to re-define the problem of global warming because the dominant perception towards the issue is one always associated with the environment.

In fact, the problem is rooted in international forums where the countries are divided based on their development scale and the conversations become negotiations rather than cooperation. One of the interviewees even claimed that the whole thing is a conspiracy of only two or three people creating all these diversions from the true problem. Thus, the cause has not arisen from the changes in the environment but politics at the national and international levels. The more those with political interests mislead on the topic, the more time they have to continue their hidden agendas.

Solutions are offered by those who are involved rather than those who should be responsible. At present, particularly in Thailand, any work dealing with global warming has been carried out separately from one sector to another. The issue, from this frame, can be solved by seeing the big picture and attempts at the collaboration of all the involved sectors in all steps of the process ranging from identifying the problems to implementing the remedies. These involved people are not just those governmental units with knowledge but also those citizens who are both the cause and the victims of the issues.

2.2 Interview Question 1.2: What in the expert's view were the private frames of individuals belonging to the professional groups in various sectors?

Global Warming as a Political Tool: This is when global warming is used as a political tool to justify certain reasoning and actions. This can be seen in both the international and local arenas. In this frame, the global warming issue has been linked to

political actions such as building political image, gaining votes and creating social injustice.

When asked about the role of the Thai government in global warming issue, the response was that central government has always been 'incompetent', 'slow', 'ignorant', and 'ineffective'. The experts did not seem to have trust in the government – both central and local governments. All of them are aware of who has the direct responsibility and what has been done roughly. Their expressions, verbal and non-verbal, demonstrate that they are clearly not satisfied with the work of the government on the matter. Only one person said that the local government or BMA has achieved success in informing citizens about the issue but that still they need to do more than that considering the resources and access they have. In this frame, the governments use the issue to add to their political campaigns as well as to create a good image in the eyes of local and international stakeholders. Yet, the problem has not been truly examined and no concrete solutions have been addressed.

When using this frame to talk about global warming, the experts gave examples of the different governmental units involved with the issue projects, but all of them are only temporary. There is no continuous and sustainable project to really handle any issue that is not an event, or even to tackle the change of climate issue in a long term. The issue of climate change has been tied to the political campaigns rather than the environmental campaigns. The names of politicians and their parties are emphasized most of the time more than the actual action description to deal with global warming. Some interviews mentioned the fact that they use the campaign to gain votes particularly among Bangkok residents to vote for them in the next governor election.

At the international level, global warming is used as a tool to create social injustice. The international protocols that are supposed to be guidelines are used as political tools by a few people to prolong the use of traditional fuel resources. This is how those behind the scenes take advantage of goodwill and human hope. One interviewee used the term 'conspiracy' to describe this act of injustice.

Global Warming as an Opportunity: The issue has been framed as an opportunity for business-oriented goals as well as for small organizations to sell products and to form networks respectively. Opportunity is framed through key words such as "benefit", "chance", and "advantages". As the issue has become a fad in Thai society (Interview 6), the phrase 'global warming' has been randomly tied to many events and products to garner attention and eventually make profits. Cloth bags were mentioned several times in the interviews about how they were labelled as global warming products without any particular relation to the real solutions for the problems. They were merely used as the opportunity to earn more money.

Not only did the interviewees discuss financial opportunities, but they also talked about the chance to build relationships among relevant organizations. Global warming is used as a tool for organization gathering rather than making anything happen. The events are organized, the campaigns are launched and the budgets are allocated, but nothing has been achieved in terms of whether the issue is actually handled or solved. The collaborations are on a superficial level rather than a real action level. Even though there are many projects developed from the goodwill of different organizations, they are not enough to really tackle the problems. In fact, they mislead the issue. Experts who

use this frame suggest the need for all sectors to see the real problems of the issue rather than borrowing the term to make the organization look good.

Moreover, global warming has been used as an opportunity for small organizations or certain movements to become visible as they jump onto the bandwagon of saving-our-world. One of the interviewees stated that, "Some NGOs are about to die. Global warming has come like rain to revive their jobs" (Interview 2).

2.3 Interview Question 1.3: What were the private frames of campaigners?

Global Warming as an Obligation: The interviews mostly viewed this issue as an obligation for the campaigners to conduct projects, particularly the Bangkok Metropolitan Administration as campaigner. The interviewees hardly demonstrated appreciation towards the campaigners despite the interviewees' acknowledgement of the global warming campaigns by BMA. Key words such as "force", "order", "duty", "policy", "plan" and "command" were used to identify the obligations of the campaigners to develop projects on global warming. Some of the interviewees elaborated on this frame, asserting that the city has to continue this project according to the joint declaration made with 36 other organizations (Interview 1). The hierarchy is strong in the BMA organization. When first approached, the responsible person in the lower ranks in the Public Relations department was willing to help with the document search but did not feel comfortable giving an interview. Instead, the higher-ranking officials were referred for the interview. After a brief and casual talk, the individual in question said that most of the ideas came from the upper levels while their duty was to follow all those orders and coordinate with the outsourced public relations agency. Therefore, the frames and strategies used in the campaigns are not initiated from the participation of citizens nor

employees but rather from the ideas of the higher ranks who have also been influenced by international collaborations.

After the formal letter was delivered to the director of Environmental Department, the director provided a list of people who used to be involved with the project from the beginning stages. Several calls were made to make appointments, one of them had already resigned and the rest insisted that the researcher talk to the highest ranking individual on the list. They did not feel comfortable giving any information especially as a representative of the organization. The main reason is that they are not at a high enough level to give the details. All they do is follow the orders of the senior chief. This is the typical way of working in governmental units in Thailand where bureaucracy is apparent and strict (Interview 7). Despite knowing the drawbacks of this system, there seems to have been no efforts made to solve the issue particularly among local governmental units. It can be assumed from this process of collecting data that the working environment in the organization, despite their attempts to create the image of being modern and friendly (Interview 7), is conservative and hierarchical silencing those in the lower positions (Scott and Poole, 2004).

The global warming campaigns projects of BMA, then, are credited to the former governor. Not only did the researcher hear from the involved campaigners, but she also read many related documents. According to his vision, the issue has become the duty of BMA officials to complete ongoing projects even though the responsible persons had already been transferred to different units. The issue has become merely a topic for a periodic project carried out annually as stated in a declaration rather than any commitment to the issue itself. When asked about their roles in communicating the

global warming issue, the interviewees said similar things presented in the report she provided after interview (BMA, 2007). Few personal opinions were given in the interview.

Even though the researcher did not have the chance to talk to the outsourced public relations agency, it can be implied from the interviews with the BMA officers that the agency was not allowed much room for participation in any part of the projects. This is because the projects had been designed before hand from those in the top authority. The public relations agency's job was to complete the projects as designed by the high-ranking officials.

External funding sources, such as JICA (Japan International Cooperation Agency), were mentioned several times as the drive to continue the project. Without their funding, the projects in the future may have to be terminated. The interviews themselves took place a month after the catastrophic tsunami in Japan in 2011 and as a result the interviewees showed some concern as to whether the projects would come to an end as Japanese funding sources might not become as available.

Another interviewee (Interview 3) also mentioned the obligations according to the funding source. The strict and complicated process in reporting a project becomes an obstacle. Some global warming projects have been conducted with time and money constraints. Thus, the quality of the projects did not reach high enough standards to really tackle the problem. When viewing the issue as an obligation, the campaigners had no motivation to initiate or even to maintain the projects. To frame global warming this way can lead to a lower quality of work as well as less human resources.

2.4 Interview Question 1.4: What were the mediated frames in the views of the experts?

Global Warming as a Trend: When asked about the mediated frames, most of the interviewees saw the issue as a trend as epitomised by their use of the key words “hot issue”, “trend”, “buzz word”, “hit”, “top word” and “marketing”. One comparison was made between global warming and the name of the famous football team ‘Manchester United’. It is widely known but it can hardly be described in detail except by football fans. Similarly, people know ‘global warming’ but they cannot provide the details of what it is historically and analytically (Interview 1). It becomes just another event for a campaign such as that of cycling to reduce global warming. In reality, this becomes only a gimmick to draw attention to the organizations’ social responsibility. The events, however, have not really yielded any particular actions to really mitigate or adapt to the issue – in this case riding a bicycle for 300 metres. It is also ironic to see the events’ participants drive to the event location and start riding short distances and then drive back by car. Instead of reducing gas emissions, they unintentionally produce more gas than on a regular day. This happens also when real attempts to tackle the problem have diminished. Some cyclists really do ride because they would love to contribute in helping with global warming. The fact that they ride here makes it just a fashionable issue of no real concern.

Global Warming as Scientific Information: The media always portray global warming as a scientific issue. The frame is emphasized by the use of scientific models, assumptions, and scientists as experts. The media, however, have simplified the details so much that sometimes this leads to an alarming message and an overreaction from

the audience. Key words used to identify this frame include “prediction”, “effects”, “model”, and “climate change”. The interviews were separated into mass media and alternative media. While the mass media tend to highlight the negative impacts such as flooding and drought, the alternative media try to create infographics to inform people about this issue (Interviews 5 and 6). The presentation of global warming is framed around the scientific issue but a dramatic sense is added to make it more attractive. The elevating global heat map has been used several times. Some interviewees concluded that some elements of the mass media did not use visuals to inform but rather to scare the audience. The journalists normally use scientific data to support their story such as use of statistics, scientist interviews and global future models.

2.5 Interview Question 1.5: How should global warming be re-framed in Thailand?

Global Warming is NOT an Environmental Problem: One of the experts asserted that global warming was not an environmental problem per se, as it is positioned now. In general, when it is viewed as a problem, there is a need for a solution. However, with this frame, it should be defined as something to live with not to fix (Interview 2). When we have a social problem, we have to fix it. However, this issue is not merely a problem. Asked if it can be fixed, the interviewee expressed in Thai that “never in ten lives”, meaning it is barely possible. It should be addressed as something to be adapted to because it is currently happening and will bring about more effects in the future.

Other issues related to global warming should be mentioned such as health, food resources, and migration. In Thailand, global warming has mostly been associated with coastal lines and increasing sea levels at the expense of other problems that will

occur. Associated with the environment and ecology, the global warming issue has been assigned to the wrong hands that do not approach the problem from the right direction (Interview 2). It should be seen as a social problem which affects more than environmental aspects. Other important dimensions such as well-being standards, food security, health, and risk management should be mentioned and discussed in further detail. The issue is directly related to quality of human life. Therefore, it should be addressed as more than just an environmental problem that can be mitigated with environmental friendly behaviours.

In this frame, the solution is not to fix it but to fix how people think (Interviews 2 and 5). The real problem is not the issue itself, but the way people view it. This should take place from the high ranks of authority to the lay people.

Global Warming and Change: There is a need for change in public minds on the global warming issue. We now have all the technology to accelerate the paradigm shift but we lack the political insight and attitude (Interview 5). The materials are ready for the sustainable development but the people are not ready. The critical mass must be encouraged for a change. The Internet can be a good platform to build up pressure on the government. There is a belief in people's wills but a turning point has to be reached.

The current understanding of this issue is incorrect. People still confuse the four major terms widely used in communicating the issue: greenhouse effects, global warming, climate change and weather change (Interview 2). Global warming has been widely used to frame a sense of heat. However, it not merely deals with heat at a specific time but the constant changes of temperature and season.

One motivator for change is financial reward (Interview 1). In the workplace environment, employees could get money rewards for riding a bike to work as calculated by distance. In households, using less air-conditioning could save 1,000,000 baht a year. However, this kind of strategy has not yet been employed.

Global Warming and Thai Values: There are two main concepts behind the questions the researcher posed to the experts in relating the global warming issue to Thai values. One is Buddhism and the other is the King's philosophy of sufficiency economy.

Thailand considers Buddhism the nations' primary religion, particularly the Theravada doctrine. This has an effect on how people view the world and their relationships with others. Relating global warming to Buddhism, therefore, should engage people with the issue as well as the application of the Buddha's teachings to global warming actions toward mitigation and adaptation. The experts had different responses to the concept mentioned even though it seems to be a common way of thinking in Thailand. Some say that it could be helpful and suggest the application of the concept in communicating (Interviews 1, 3, 4, and 5), while others think it is not enough and that it should be presented in a new way (Interviews 2 and 6). Those interviewees who thought Buddhism could be a frame that works well with Thai people gave examples of how people tend to believe in karma or the concept of "what goes around, comes around". When they have this frame in mind, they will accept the fact that global warming is a consequence of previous actions and what we do will also have an effect on the next generation.

Two interviewees (Interviews 2 and 5), however, suggested that Thai people should think outside the box and avoid misguided Buddhist-influenced concepts such as “come what may”. When it comes to the global warming issue, the thinking should first accept the fact that human beings play an important role in creating and aggravating the problem. Therefore, it is human beings who should do something about it. They cannot just sit and wait for karma to take place and let things be. In fact, they should think about how to do good deeds now to result in better outcomes later. Death should not be used as an excuse to ignore the problem.

Similar reactions were evident when inquiring about relating global warming to the King’s philosophy of sufficiency economy. There were some who agreed and some who did not. The philosophy was introduced by the King Bhumibol (Rama IX) to encourage citizens to live simple lives as an alternative to capitalism. Despite the constitutional role of the King, he has become more than a mere symbol of the head of the state. He has a huge influence on how Thais both think and act. When asked about this concept and how it ties in with communicating global warming, some experts respectfully negate the link as the concept has been widely employed in the context of agriculture and a simpler, more primitive, way of living. This is not what we face with global warming these days. The philosophy needs to be modified to communicate something about the future rather than harking back to a simpler and more peaceful past. Moreover, from this view, the use of an authoritative philosophy repeats the same old way of how Thai people learn. That is, seniority is the main cultural concept influencing how people act towards one another. The core idea is to be submissive and listen to their seniors because of their age, wealth and social status. Therefore, the use

of this philosophy would encourage people to wait to be told what to do rather than creating a truly participatory environment. On the other hand, some experts mentioned the King's philosophy before the researcher's question. They said the King has given a good example of how to communicate new ideas through existing frames. His sufficiency economy philosophy may lead to different interpretations but the fact that it can encourage people to react to the concept can be viewed as good process. The global warming issue should also be presented in the same way. There should not be a single truth, but the most important aspect is to have the citizens' engagement, particularly in terms of their cognitive processes.

The King's communicative style has also been labelled a success story (Interviews 2 and 3). The use of unfamiliar terms and attempts to reach the attention of the masses are the main strong points. However, some have criticized the interpretation of the concept as one that concerns agricultural life and nature, meaning that this can be hard for those in urban areas to associate themselves with (Interviews 4 and 5).

Another Thai value rarely mentioned is that of superstitious beliefs which are also widely accepted throughout Thailand (Interview 1). At the beginning of each year, psychics will predict what will happen. The interviewees suggested that the psychics could be used as campaigners to encourage people to be aware of the future scenarios.

The table below demonstrates the interview questions and global warming frames emerge from the interviewees' answers. The key words associated to the frames are also provided.

Interview Questions	Global Warming Frames	Key Words
1. What were the private frames of the expert himself or herself?	Global Warming as an Environmental Issue	environment, ecology, nature
	Global Warming as a Social Issue	society, human being, knowledge
2. What in the expert's view were the private frames of individuals belonging to professional groups in various sector?	Global Warming as a Political Tool	politicians, election
	Global Warming as an Opportunity	chance, alternative way
3. What were the private frames of campaigners?	Global Warming as an Obligation	agreement, contract
4. What were the mediated frames in the views of the experts?	Global Warming as a Trend	trend, fashion, fad, hit
	Global Warming as Scientific Information	science, data, scientist
5. How should global warming be framed in Thailand?	Global Warming as NOT an Environmental Issue	not environmental issue, wrong thinking, misunderstanding
	Global Warming and Change	change, thinking change, behavior change, structural change
	Global Warming and Thai Values	Buddhism, Sufficient Economy

3. Research Question 1: Global Warming Experts' Private Frames

To answer the first research question, the interview transcripts were analyzed based on Entman (1993)'s four potential outcomes of frames: the identified problem, the cause, the moral judgment and the suggested solutions. From the constant comparative method, three main frames were identified based on their saliency and frequency. The first and dominant frame is global warming as a social issue (coverage = 52.87%). The secondary frame is global warming as an environmental issue (coverage = 35.60%). The uncommon but noteworthy frame is global warming as a spiritual issue (coverage = 11.51%). Each frame was reported by the main theme from each interview supported with keywords and metaphors as categorized into Entman's four potential outcomes.

3.1 Dominant Frames among Global Warming Experts' Private Frames

Social Frame: Global warming is a social problem that needs a better knowledge in people to deal with its effects rather to fix it. The social frame focuses on human beings' interests and their involvement with the issue including their responsibility as the cause, their decrease in well-being as the consequence, and the change of their attitudes and habits to increase their involvement. The main problems in this frame include the lack of knowledge, the unequal access to resources, and the negligence of authority with power. The moral judgment in this frame is that of a good quality of life and good governance. The solutions are advocate campaigns and education.

The main problem is the lack of knowledge. One interviewee (Interview 2) even stated that "climate change is not a scientific issue; climate change is not an environmental issue." The interviewee went on to identify it as a "social matter" or "social injustice". Another called it a "social trend" (Interview 6). Now, especially in Thailand, the

issue has been viewed the wrong way. As a result, the issue has been assigned to the wrong departments, such as the Ministry of Natural Resources and Environment. The problem is not addressed at the policy level as if the authoritative persons do not know how serious global warming issue is (Interview 6). The government does not hold this issue in high priority in terms of how much effect it would have on the country as a whole (Interview 1). The emphasis has been put too much on the household level but the government has not given any concrete plans about how to handle the issue. There is a need to plan something based on sufficient and correct information. The wrong emphasis in knowledge also leads to problems. This creates the “wrong communication” (Interview 2). The issue should be handled as policy problem or “structural problem rather than campaigning at an individual level like what the governments try to do” (Interview 6).

The general population do not have sufficient information on the issue. They know the words global warming but they do not understand it in detail (Interview 8). One interviewee even stated that 90% of people in the rural areas might not know that they are responsible for the global warming problem (Interview 1). They did not have the knowledge and they did not mind the fact that they were not informed well enough because they have other more important priorities concerning daily necessities such as food and income. It did not concern them who should be in charge of tackling the global warming issue. Lay people are not part of the learning process (Interview 5). There is no education; thus, “you can build the intelligence.”

Taking a bigger view of injustice, one interviewee mentioned the establishment of the United Nations Framework Convention on Climate Change and that it had been

initiated by the “madness of two or three people” (Interview 2). Moreover, the same convention led to the need to negotiate one’s own financial benefit rather than cooperate. “So, even though everyone was there, they would do anything to gain the most and lose the least,” he added. Another example was given as concerns the issue of “humanitarian sovereignty” at the international level (Interview 4). If there was a flood in Bangladesh, the alarm would be announced of course. But what if the flood was so severe that the country was not able to control it anymore ? The interviewee asked the question, “Would the neighbours be able and willing to take refugees?” (Interview 4). If not, what would happen to those affected by global warming in the underdeveloped countries? There is no policy to handle this type of situation.

The unequal access to resources includes the reach of knowledge and the use of media. This is also called “climate justice” (Interview 4) or when the justice will be drawn upon a matter of climate change. Knowledge is apparently unequal for common people especially those peasants living in remote areas (Interview 5). They, in fact, are those who really need the knowledge to survive the consequences of global warming. One interviewee gave an example of power and the need for knowledge by telling a story about how to judge the environment from the quality of the lichen (Interview 5). When she was asked by the non-governmental organization to promote basic ecological knowledge for people in the electrical plant zone, she had to educate two main types of people: the company’s employees and the village residents. The former joined the workshop as an obligation and they did not seem to care much about the fact that the quality of the lichen on the trees can indicate the quality of the air and humidity in the area and prove whether it is safe to live in the area. The latter, on the contrary, eagerly

joined the workshop and asked questions as well as discussing their own traditional ways of understanding nature such as through basic body conditions. Unfortunately, the latter did not have the opportunity to regularly join the workshops, as they do not have money and or the connections to organize it. She further commented that a similar scenario is that happening with the global warming issue. Those who have access to knowledge seem to be less concerned by the matter when compared to those who might be directly impacted by the issue but have no direct chance to get any knowledge. It is a matter of “empowerment” and “access to information” (Interview 5). Power of learning is important especially for the public. Some individuals have to shift their ways of learning. Unfortunately, “the government’s level of inconsiderateness is excellent,” the interviewee said sarcastically, and added that corruption has always been the government’s main job (Interview 1, 6).

Access to the media is another problem of concern in the social frame. One interviewee used the Thai proverb “the longer the hands the further you can reach for more” which refers to the greed and selfishness of those who would do anything for their own benefit without thinking of others (Interview 2). For example, those who can reach the media try to very loudly promote the global warming trend, but ignore other issues that might come with it such as social issues (e.g. migration, overpopulation) or health issues (e.g. AIDS, sex crime). Unfortunately, they put too much focus on the seashore and sea level problem, which are not supposed to be the main problems (Interview 2).

When people do not know what they are dealing with, they do not seem to be engaged with the matter mentally and physically. They do not have any political will or attitudes towards the matter (Interview 5). They just go with the flow and follow the trend

without any real participation. Even though there are so many issues that should be addressed as regards the global warming matter, all that most people do is ignore it. As a result, solutions have never been discussed and handled for real. Society should start to learn and understand the issue more seriously (Interview 6). Global warming alone sounds like a myth. It does not convey any descriptive messages. Paradoxically, it becomes its own problem because people do not understand the word itself. It has been talked about superficially and people lack an in-depth understanding of the multiple dimensions of the issue. The interviewer used the analogy “global warming issue is like the top of the mountain”, meaning that many problems pile up to become the global warming problem. Thus, it is hard to know where to start from the bottom.

The major cause of knowledge deficiency is governmental level authority. The governmental officials and politicians who formed the government have never paid great attention to this matter and have always pushed the burden as far away from them as they could (Interview 2). While the local community is ready and eager to learn more about what would happen in their area and how to handle it, the governmental units do not do enough to fulfil the people’s needs. This has become a predicament in terms of community justice and community rights. The knowledge has been served as a “cookbook manual” with exact steps of how to (Interview 2). Therefore, outcomes are more important than the process. The government would like to reach certain goals to gain votes and budget but they never learn the process in detail. The time condition is another constant of this high power authority, as they have to report budgets and projects in accordance to yearly plans. The injustice has become an opportunity for those with power to take advantage of those less privileged. They have exploited the

virtuousness of the people as tools to earn money. “These people are quick. They hunt for others’ goodness. This is injustice,” one interviewee commented (Interview 2). Unfortunately, Thai people on the whole are easily misled as well. This is due to the insufficient information provided to them on the matter. In Thai society taking advantage of others is a common occurrence. The global warming issue has been part of this and used as a “deodorant” because the real problem has never been discussed. Global warming becomes a scapegoat for the social problem. When there is no way out, violence seems to be the option, “just like when they burnt down the town” during the national political turmoil in 2010 (Interview 2).

The authorities can no longer use the same old approach to governing because the people have changed. There is a greater diversity of backgrounds and styles. In the old days, people were seen as being simpler in terms of expressing themselves, but these days they have more options (Interview 5). This issue is “a challenge that human beings have never faced before” (Interview 5). Those with authority have not been bothered about change because they perceive global warming as not having any effect on them. They know they can handle it with their money. They know that the problem will not affect them any time soon. Moreover, people’s consumption habits have changed. They are already used to certain ways of living their lives. It is difficult to change them easily with the one-way or top-down communication that the government is familiar with.

The social differences between the capital city and other provinces are seen as a cause in the social frame. In Thailand, Bangkok should definitely take responsibility for the problem because they have released GHG emissions the most (Interview 3). However, born as a Bangkokian, the interviewee also added that the city had never been

this crowded with people from other provinces. We should not blame Bangkokians alone but rather anyone who stays or lives in the city. It did not seem fair to the interviewer that those who have lived in Bangkok for their whole lives had to take full responsibility for the fact that the city has contributed to global warming the most. Everyone should take part even those who temporarily lived in the city.

Not only does social injustice from global warming can be seen in national level, but it also presents in the international realm. If the fault should be put on someone, it must be on those who contribute most to the issue. Those developed countries such as United States of America should be held more responsible because they have released the gases for more than 200 years. If we compare industrial revolutions (Interview 6), Thailand started way behind the developed economies. The total amount of CO₂ released by Thailand cannot be compared to those created by developed ones, or more likely given a figure of “around 0.01% or even less like 0.00001” (Interview 3). The interviewee also added, “Why do we have to be as responsible as them? Won’t they do anything to help? Will they just let us go?” (Interview 3). He further commented that, “There is not much we can do. We’ll die all together around the world...But they won’t help. If something happens, they’ll let us be – whatever.” He illustrated his point with a car accident analogy. If he was hit by a car, he would sue everyone not just the driver. “It’s even their [USA] fault that I’m having a headache now,” he added to emphasis how much Thai people should take responsibility when compared to Americans. The injustice cannot be seen as a matter of responsibility taken between developed countries and developing ones. In addition, even though most people were aware of the global warming issue, the United States of America as a country has not “moved much”

(Interview 5). They know that they can survive with their financial resources and technology. Therefore, the main question is not how to survive but how to also help those with less financial and technological resources to survive together.

When compared to citizens in developed countries, Thai people cannot be as fully concerned about the global warming issue due to their worries about basic living conditions (Interview 4). This is another cause as viewed from the social frame on global warming. Lay people still have to struggle everyday to earn enough money for food and other basic necessities in their lives. They would not have enough time and effort left to think much about an issue that is so remote from them, especially one that would not directly make their lives better (Interview 2). The global warming problem is then caused by the inequality in trying to live decent lives.

Moral judgments have concerned the good quality of life and good governance. The former theme is drawn from key words including “human security” (Interview 2), “livelihood improvement” (Interview 4) and the latter includes “developed countries” (Interview 1), “holistic approach” (Interviews 2 and 5), “climate resilience society” (Interview 4) and “successful index” (Interview 8).

The good quality of life has been discussed in terms of the basic needs of human beings such as food, shelter, and medical availability. One interviewee was greatly concerned about food scarcity in the future (Interview 4). She gave an example of rice and oranges in Thailand that used to be common but these days they have become imported from the country’s neighbours. Shelters were mentioned particularly those in the vulnerable areas such as coastal lines and flood prone zones (Interviews 1 and 2). Also, outbreaks of new diseases might occur as consequences of global

warming (Interviews 1 and 5), so it is important to prepare the knowledge for handling it. It is important to value basic needs and their future conditions based on the effects of global warming.

A good quality of life can be achieved by good governance. Despite the negative comments on governmental units from most interviewees except one, they hoped to see good governance from those in authority and more power given to lay people. The top-down communication, even with successful results, should not be valued. If change does not happen in the thinking process, things will not change much (Interview 2). Thus, it is crucial for the government and authority units to see the big picture of the problem and be able to connect the pieces or relationships of different elements in this matter (Interview 5). The responsible units should no longer work separately especially when the region will become united as the ASEAN Community (Interview 2). A long-term vision is needed to handle the issue. For example, governments have to figure out how to handle population mobility when ASEAN agrees to open its borders. This is more important than yearly flooding. The problem should not be considered inwardly but it must be judged from the big picture. A climate resilience society can be created with the cooperation from both local people and international organizations (Interview 4). There are many societies that can handle the problem well such as those in the Scandinavian region (Interview 1). The Thai government should learn from the successful models and adapt them to create a better world for the next generation. The success index should be rooted in individual change (Interview 8). Certain habits should be elevated to become social traditions and standards. The better

conditions of living should be placed as a value to see if problems have been coped successfully.

The governments have to accept the fact that this is a real problem (Interviews 1 and 2) and make it part of the national agenda. They should enforce some laws and regulations to seriously tackle the problem. For example, they should limit the numbers of cars entering the downtown zone where the pollution level is already high. However, they are not brave enough to do this, as they are afraid of losing votes. This has become a structural problem (Interviews 2 and 6) at policy level because the government has not positioned it correctly.

Global warming has also been associated with climate justice (Interview 4), environmental security and migration (Interview 2), ecological literacy (Interview 5) relating to human interest in social frame. These are concepts that deal with human interest. Moreover, risk communication (Interview 2) leads to communication platforms to exchange a wide range of ideas. True participatory communication should be encouraged.

It is too abstract to grab the real essence of the global warming issue to communicate to the lay public because the consequences are too remote from the present. One interviewee used the well-known metaphor of the frog swimming in the pot over the stove. The frog did not realize how hot the water had become so it enjoyed the warm water. Once the water was boiling, it was too late for the frog to survive (Interview 4). This theme has always been related to the human interest of survival hopes.

People, in fact, feel the changes in weather such as flooding and rising temperatures. However, they do not feel that they should do something about it as the problem does not really bother them.

Concerning the health issue (Interview 1), many new types of diseases will occur. Unfortunately, the relationship between global warming and health has not been mentioned much anywhere while linking the issue is supposed to help get the issue closer to lay people.

Global warming should not be the central point of discussion. In fact, the question should be raised based on whether society is at risk (Interview 2). It is not necessary that everyone has to adapt and mitigate. If they are not in an affected area or not even responsible for the gas emissions, they should not be forced to do anything about it. This is when the problem is put in the wrong hands and nothing can be achieved but the wasting of time and resources. Community-based adaptation does not work because it is not the community's role to handle the issue (Interview 2). Localizing the responses can lead to mal-adaption and huge budget costs.

3.2 Secondary Frames among Global Warming Experts' Private Frames

Environmental Frames: Global warming is an environmental problem that needs the ecological solutions to bring back the balance to the Nature. Global warming is seen as environmental issue. The problems are natural and environmental related. The causes are human selfishness in taking advantage of limited natural resources. The responsibility has been placed with citizens who should be more concerned with the issue and take some action. The emphasis has been put on the consequences of global

warming on natural settings and lives. The suggested solutions are to promote natural conservation.

In the environmental frame, the global warming problems have been put into an “environmental study” that cannot be investigated from the traditional perspective on environment (Interview 5). The terms employed to explain the problems include ‘energy efficiency’, ‘biodiversity’, ‘marine resources’, ‘forest resources’, ‘environmental security’ (Interview 4). The problems have gone beyond individual responsibility such as household energy consumption or resource consumption. They have become part of our lives rather than the external environment. Global warming problems cover subjects concerning food and food supplies, such as limited amounts and changes in production. Those relevant responsible sectors are mainly those related to energy and industry.

As concerns funding sources (Interviews 3, 4 and 7), money is another problem in handling the environmental issue. There is a lack of sufficient money and a long-term plan to budget everywhere ranging from international organizations to local universities. The issue can be related to other environmental issues such as the marine environment (Interview 4).

Global warming has also been seen as a global issue (Interviews 2 and 3). In the global environment, it becomes very remote from people especially those who consider themselves a developing country where there is still a need to earn money and care more about their everyday lives rather than the future of the environment.

3.3 Uncommon but Noteworthy Frames among Global Warming Experts' Private Frames

Spiritual Frames: Global warming is the consequence of human greed that destroys Earth and now they have to live with the Nature's revenge. Only a few statements were coded for this frame. The keywords include 'spiritual evolution' (Interview 5) and 'global warming myth' (Interview 6). The traditional way of life (Interviews 1 and 2) is the easy way out for global warming as people use fewer resources and communities are isolated. There is no complex structure as to how people live and consume. Thus, fewer resources are used leading to lower gas emissions. In the past, barter system was used without any currency or regulations. They did not have to be concerned about resource management. No official government was assigned. People acquired their own knowledge and fulfilled their basic needs from what they could find. However, these days, citizens rely on their government including on the matters of the social system and human security. The governing system itself has made it become too complicated.

Next table is a summary of the frames found from interviews with the global warming experts in Thailand. The dominant frame is Social Frame or 'Global warming is a social problem caused by ignorance and need equal access to knowledge to be the best solution'. The next is Environmental Frame or 'Global warming is an environmental issue caused by industrialized development and need environmental friendly policy to bring the better ecology'. Lastly, the Spiritual Frame or 'Global warming is a conflict between Nature and human beings; thus, there is a need to change people's thinking to live simply with Nature'.

Global Warming Frames	The Identified Problems	The Causes	The Moral Judgments	The Suggested Solutions
Dominant: Social Frame (coverage 52.87%)	social problems - injustice - lack of structure - lack of enforcement	human ignorance	equal access	knowledge distribution
Secondary: Environmental Frame (coverage 35.60%)	ecological problems - pollution - catastrophe	modernization / industrialized development	better environment	environmental friendly policy nationally and internationally
Uncommon but Noteworthy: Spiritual Frame (coverage 11.51%)	conflict between human and nature	human greed and self-interest	back to nature	change of people's thinking

Summary

The in-depth interviews with the selected global warming experts in Thailand demonstrated that the most common frame found was the social frame as they put the focus mainly on human interest. Secondary and but similar is the environmental frame. The last uncommon but noteworthy frame is the spiritual frame. The experts also identified themselves with different roles in tackling the global warming issue such as those of liaison, information provider and reference source.

4.2 GLOBAL WARMING CAMPAIGN FRAMES

Introduction

This chapter reports on the findings from the document research with data sources from the BMA global warming campaign project from 2007-2010 to answer RQ 2: 'What are the frames of BMA global warming campaign projects?' Two main coding sheets were used to code the data to find: 1) public relations frames, and 2) global warming frames. The first main frames were reported based on the selected campaign projects before the second main frames were categorized based on their frequency and saliency into the three main groups of dominant frames, secondary frames and uncommon but noteworthy frames. The chapter first briefly talks about the qualitative approach used to conduct this phase of research and the coding sheets developed for frame analysis. Then, each selected BMA global warming campaign is summarized and its PR frames found are reported such as the frame of issues, frame of actions and frame of responsibility. Finally, the chapter looks into the global warming frames found from the materials collected, namely the financial frame, authoritative frame and lifestyle frame.

1. Qualitative Analysis of Campaign Frames

Even though framing analysis has been conducted within the realm of communication studies, most of the research has applied linguistic devices to measure frames (Pan & Kosicki 1993). However, when it comes to communicating global warming, particularly with campaigns, the study cannot solely rely on news texts. In fact, not only do campaign communications include printed and recorded texts from controlled media, brochures and organizational manuals, but also news coverage and

feedback from other organizations in uncontrolled media such as television news or corporate magazines from both printed and online sources (Wilcox & Cameron 2009).

To identify the framing devices offered by Gamson and Modigliani (1989) including metaphors, historical lessons, catchphrases, depictions, and visual images, the campaign materials distributed by BMA between 2007-2010 from the organization resource department and responsible officials were collated. The selection criteria included the main objective of that particular tool. For example, if the main purpose of the brochure was to inform the public about global warming, the texts were included. However, if the main purpose was to support an election campaign, despite a token mention of global warming, the brochure was excluded. This is because the major objective of the study is to examine the global warming campaign materials used in BMA environmental campaigns. Another condition is the main theme of the materials. The core message of the entire campaign tool should focus on global warming rather than presenting a more general environmental friendly theme.

There were 15 campaign projects run by the BMA during 2007-2010. However a pilot survey examining target audiences' knowledge of global warming before and after the BMA campaigns showed that only four BMA global warming campaign projects were significantly (more than 50% of total $n=30$) remembered. The most recognized project was "Using Cloth Bags in Place of Plastic" (86.4%, $n=30$), and the joint second most recognized projects were "Reduce Garbage" (68.2%, $n=30$) and "60 Earth Hour" (68.2%, $n=30$). The last campaign was "Using Compact Fluorescent Lamps" (59.1%, $n=30$). Therefore, these four global warming campaign projects were selected for frame

analysis of communications. It is likely that these four campaigns had more influence than others on target audience, as they were able to recognize them over time.



Figure 10 Photograph Sampling from BMA Global Warming Campaigns

1.2 Coding Sheets

As part of the concurrent mixed methods research design, the coding process of campaign materials was adjusted along the way particularly with the influence from the frames found from the interview questions which focus on the experts' opinions on the BMA global warming campaigns and the pilot survey with 30 respondents. There were two main coding sheets used for this phase. The first sheet was made to investigate the public relations frames used in each campaign from BMA global warming projects. According to Hallahan (1999), seven PR frames can be used in any public relations works when communicating to the target audience, namely situations, attributes, risky choices, actions, issues, responsibility and news. This sheet aimed at revealing the PR frames used most in the campaigns to see how BMA has communicated global warming

to Bangkokians. The unit of analysis includes key words and visual images from each campaign presented in the printed materials collected from both primary and secondary sources. The frames found were also compared to the projects' major objectives to talk about the effectiveness in the discussion chapter. Another coding sheet was first developed based on Gamson and Modigliani's framing devices (1998) including metaphors, historical lessons, catchphrases, depictions, and visual images. All these elements shown in the material were first categorized based on their themes. Then, all the themes were grouped again to uncover the frames used for all the selected projects. The frequency and saliency were used to find the dominant, the secondary and the uncommon frames. Both coding sheets are provided below:

Table 6 Global Warming Frames Coding Sheet for Each Campaign Materials

Framing Elements	Earth Hour (EH)	Use Cloth Bags (CB)	Change Light Bulb (LB)	Reduce Garbage (RG)
Metaphors	...text... (number),	...text... (number),	...text... (number),	...text... (number),
Historical lessons	...text... (number),	...text... (number),	...text... (number),	...text... (number),
Catchphrases	...text... (number),	...text... (number),	...text... (number),	...text... (number),
Depictions	...text... (number),	...text... (number),	...text... (number),	...text... (number),
Visual images	...text... (number),	...text... (number),	...text... (number),	...text... (number),

2. Bangkok Metropolitan Administration Global Warming Campaign Projects

The Bangkok Metropolitan Administration (BMA) is the name given to the local government of the Bangkok province – the capital city of Thailand. The administration's roles are to formulate and implement policies regarding the management of Bangkok; these include: transport services, urban planning, waste management, housing, roads and highways, security services and the environment. The powers and roles of the

Office of the Governor of Bangkok in accordance with the Administration of Bangkok Province Act of 1985 include:

- Formulating and implementing policies for the Bangkok Metropolitan area;
- Being the head of the Bangkok Metropolitan Administration;
- Holding the power to appoint and remove: Deputy Governors, advisors, board members, city officials and servants;
- Coordinating and carrying out the orders of the Cabinet of Thailand, the Prime Minister of Thailand and the Ministry of Interior;
- Overseeing the smooth running of the various agencies and services of the city;
- Holding the power to draw up legislation and bills for the city, to be considered in the Bangkok Metropolitan Council.

The Governor of Bangkok is the head of this local government body. The Act also states that the Governor is also invested with the same powers as any other Governor of a Province of Thailand and any other mayor. The Governor is also the chief executive of the Bangkok Metropolitan Administration (BMA) and is elected to a renewable term of four years. The headquarters office is called Bangkok City Hall located in the old town area close to the Royal Grand Palace and Temple.

The aims of the BMA toward the climate change issue focus on the policy, the implementations and its residents. While the people make adjustments in their daily activities or lifestyle, the BMA provides them with the knowledge and support they need so that these improvements can be realized as efficiently and painlessly as possible

according to Dr. Pongsak Semson, the Permanent Secretary for the Bangkok Metropolitan Administration in 2009.

Action has been taken by the BMA is to create partnerships with various stakeholders to create momentum, continuity, longevity and success for the various programs upon which it embarks. On 9 May 2007, 36 organizations jointly signed the BMA declaration of Cooperation on Alleviating Global Warming Problems at the conclusion of their meeting in the United Nations Building in Bangkok. The alliances include the governmental sectors (i.e. Ministry of Natural Resources and Environment, Ministry of Energy, Ministry of Education, Ministry of Transportation), defense forces (i.e. Royal Thai Arm Force Headquarter, Royal Thai Army, Royal Thai Air Force, Royal Thai Navy, Royal Thai Police, Thai Metropolitan Police), energy sectors (i.e. Metropolitan Electricity Authority, The Federation of Thai Industries, Petroleum Authority of Thailand, Bangchak Petroleum Public, Electricity Generating Authority of Thailand), urban NGO sectors (i.e. Association of Siamese Architects, The Engineering Institute of Thailand, Thai Hotels Association, Thailand Automotive Institute, Thai City Planners Society, Urban Planning Network, Thailand Urban Design Associate), environmental sectors (i.e. Thailand Environmental Institute, Association for the Development of Environmental Quality, Foundation for Anti Air Pollution and Environmental Protection, Green World Foundation, Chum Chon Thai Foundation, Green Leaf Foundation, Thai Environmental Networks), Media (Sarakadee Magazines, GMM Media), and people (Bangkok Youth Council, Environmental Youth Club, Student Council for Bangkok Metropolitan Area Social Network, Federation of Senior Citizen in Bangkok).

The declaration highlighted five strategies to mitigate global warming, namely:

1. Reduce energy consumption and maximize efficiencies in resource utilization in all activities to minimize global impacts;
2. Promote and support all sectors and stakeholders to jointly reduce GHG emissions;
3. Promote the sufficiency economy lifestyle to prepare for, and adapt to, global warming;
4. Promote and support activities that lead to GHG absorption;
5. Promote and support activities that continuously work to mitigate global warming by building public awareness and knowledge.

After the declaration's signing, the BMA organized several campaign events to follow the strategies aiming to raise popular awareness among Bangkokians and to motivate their participation in reducing the city's greenhouse gas emissions.

It also led to the establishment of the BMA's Action Plan of Global Warming Mitigation 2007-2012, which calls for it to: expand mass transit and improve traffic systems; promote the use of renewable energy; improve electricity consumption efficiency; improve solid waste management and wastewater treatment efficiency; and expand park areas. The Action Plan is aimed at bringing about a reduction in Bangkok's greenhouse gas emissions over a period of five years, that will be 15 percent below the levels currently projected for 2012.

The BMA has established several collaborations with the governmental sectors in accordance with the declaration. For example, with the Ministry of Energy, they established energy efficient standards for new municipal construction and major renovations, and perform energy audits for existing buildings. Another collaboration is

with the Ministry of Transportation. They installed light-emitting diode (LED) traffic signals and traffic flow management systems, updated street lighting to a high efficiency level, increased wastewater utilities and establishes landfill-gas energy projects. Similar works have also been undertaken with the Thai Industrial Standards Institute including the creation of efficiency standards for office equipments, the adoption of recycled salvaged product use policies, and development of local purchasing programs. All the actions aim at reducing the emissions of greenhouse gases and adapting to climate change.

Moreover, the BMA seeks collaborations from internal employees and facilities. Alternative fuel vehicles and idle-engine reduction policies and campaigns have been established to promote greenhouse gas reduction awareness among city employees. The BMA has also created a purchasing program to procure energy-efficient appliances and purchase materials that require less energy and reduce the amount of waste that such appliances and materials produce. Lastly, the Association has modified school buses, waste haulers and ambulances to use compressed natural gas (CNG) and biofuels to reduce the emissions of its vehicle fleets.

Other targets of declarations are the Bangkokians – the residents in the city – who are responsible for the greenhouse gas emissions from their daily activities. The policy of the BMA is to implement policies and programs that help residents to understand and adapt to climate change, enabling them to make the adjustments required to cope with the various adverse impacts that climate change is expected to generate.

From the global issue to the actions of local government, climate change has stimulated many reactions both from scientific and social perspectives. International policies and agreements also play a part in national plans and actions. The reviews of climate change on the international level include the definitions, problems, causes, impacts and solutions leading to discussions on the micro scale. Thailand has played an important role in climate change as the country is a major source of greenhouse gas emissions in South East Asia. It also faces major risks because its capital city is considered one of the most vulnerable cities expose to the inundation of sea level rises. Something must be done to alleviate the situation and the projected circumstances. This chapter lays out the climate change background on the international and national levels. This helps to understand what happened and what has been done with the issue. This leads to the question of whether the local government has contributed enough to global attempts. Apart from the policy and plans, have they achieved the several proposed goals? Communication is the crucial tool to reveal the dynamics of governmental positions and civil participation. Thus, the next chapter discusses in detail how the issue is studied in the communication field, particularly in the environmental campaign school.

From 2007-2010, the BMA conducted 11 global warming campaigns. Some of them are under the total responsibility of the BMA while others were in partnership with different organizations such as WWF, UNEP, and the Ministry of Energy. The researcher first collected all the materials from the BMA office, Internet and library. From all these documents, the researcher was able to identify the key persons as global warming experts in Thailand. Moreover, the names of the BMA global warming campaign projects were included in the pilot survey to see if the potential target audience could

recognize any. From the pilot survey (n=30), it turned out that only four campaign projects were remembered by most of the respondents. Therefore, this section summarizes the background of these four campaigns in order to give a better idea of what has been done and to be the base for the next section where the frames found from these campaigns are reported.

3. Public Relations Frames in BMA Global Warming Campaign Projects

From the selected campaigns, to answer the RQ 2: 'What are the frames in BMA global warming campaigns?', there are two categories of frames investigated in this chapter: the PR frames and the global warming frames. This section reports on the PR frames. As proposed by Hallahan (1999), there are seven major frames that can be drawn from general PR projects. From the analysis of four selected campaign projects, the PR frames used in each project were emphasized differently. Therefore, the report is organized based on the project with the summarized details and reporting of the frames most used in each one.

3.1 Use Cloth Bags in Place of Plastic

Among the four campaign projects selected, this one received the highest percentage of recognition (86.4%, n=30). It is a campaign to encourage the people of Bangkok to use reusable cloth bags when shopping instead of accepting single-use plastic bags from vendors. The campaign was launched on 9 September 2007 with Mr. Apirak Kosayothin as the main presenter.

Framing of Choices and Actions

The focus of this campaign is to offer alternatives in how to contribute to the global warming issue.

3.2 Reduce Garbage

This campaign was launched on 9 October 2007. The main aim is to encourage the people of Bangkok to be mindful of their consumption and the solid waste it generates, and also to separate solid waste for ease of recycling. Additionally, the campaign also encourages the appropriate disposal of household hazardous waste.

Framing of Attributes and Actions

One main duty of BMA is garbage management. Thus, with this campaign, the major framing they used was to accentuate particular aspects of the organizations' good qualities and services.

3.3 Earth Hour

Earth Hour was first initiated by a global event organized by WWF (World Wide Fund for Nature, also known as the World Wildlife Fund) and is held on the last Saturday of March annually, asking households and businesses to turn off their non-essential lights for one hour to raise awareness towards the need to take action on climate change. The campaign project first started in Sydney with more than 2.2 million participants in Australia turning off all non-essential lights. Following Sydney's lead, many other cities around the world adopted the event in 2008 (Earth Hour Organization, 2011). Annually, Earth Hour took place from 8:30 p.m. to 9:30 p.m., at the participants' local time.

The BMA has recognized the significance of this particular global event which can draw the attention of public to the global warming issue. Thus, the collaborative project was initiated in 2008 on 29 March from 20:00-21:00 in the central area of the city by Mr. Apirak Kosayothin, the governor of Bangkok at that time and William Schaedla,

the director of WWF Thailand with the famous singer, Kawee Tanjararak as the Earth Hour Ambassador. Bangkok has claimed that it was among the first 23 cities to participate in this event after the first one launched in Sydney.

Framing of Situations and Actions

The first and most prominent framing used in the Earth Hour campaign projects with collaboration between BMA and WWF is situations. This is clear with the roles and rules indicated in the event summary. The reality of global warming is shaped through the language and interactions among the people involved, especially with the focus on the special event held annually. Initially, the campaign was launched based on the low budget and power of online connections. Without a massive budget spent, Earth Hour has been recognized worldwide within the first year of its opening. The roles of participants include spreading the word about climate change and showing their concern by turning off the lights on certain dates indicated every year. Materials, pamphlets and posters were designed to emphasize the logo of Earth Hour with the translation of words into Thai. The main content on most of the materials are the date and time of the event. It is not stated, however, whether the participants have to show up at the centre of the event like at a major shopping centre such as Central World on Rajaprasong Road. The key words and phrases used to state the situation include “switch off the light”, “earth hour”, “cool earth”, and “uniting people”.

The framing of situations is also apparent with the event launch. The climate change issue has not been stirred as much as the happening of the event itself. The main purpose of the gathering is to create awareness by counting on how people know about when and where to switch off the lights. The visual images attached with the news

release and news reports are group photos with key persons such as the Bangkok governor or the associate directors, the director of WWF or associate officers and the ambassadors. Not only can this event open the venue for participation from anyone, but it also provides a space for famous people to declare their concerns on environmental issues. The situation is framed with the picture of people gathering from diverse backgrounds and the certain activities that they can do together to make a statement about their contribution to the climate change problem.

The framing of actions is also used in the campaign materials. The key words used are frequently made in imperative clauses such as “switch off the light”, “join us”, and “reduce global warming” (literally translated from Thai). The campaigns focus on the need for action from the participants. There are also other different activities included in the news release such as the encouragement to fight against global warming by building networks all around the world, using less energy and making it become personal habit.

The results of actions such as the statistics on energy saved, the number of participants, and other relevant activities are also used as part of this framing. The focus of the provided information is not on the attributes of global warming nor the organizations, but rather it is put on this particular event of 60 hours to save energy. The focus is on what people can do to contribute to global warming mitigation. The attempt to shift the issue to build organizations’ positive images has been detected but it has not been pushed to become the main message. Therefore, from this particular event, the major framings used are situations and actions.

3.4 Using Compact Fluorescent Lamps

On 9 June 2007, this campaign was launched in collaboration with the Ministry of Energy. The aim is to encourage Bangkok residents to change their incandescent light bulbs for energy-saving or compact fluorescent bulbs. A pilot project was first organized at one of Bangkok's major marketplaces, where 1,100 light bulbs were changed. Due to the success of initial projects, BMA has planned to replicate it at 192 other marketplaces around Bangkok in order to switch up to 44,000 bulbs. The ultimate hope is to yield a result in the reduction of 8,000 tons of CO₂ annually. The project has since taken an approach towards the household use of light bulbs. The project is actually a part of Action Plan 2: Electricity Conservation Campaign for Bangkokian (BMA, 2009, p. 21). The action plan covers the scope of the workplace to the household space.

Framing of Actions

This campaign project mainly focuses on the change of citizens' action especially in how they consume the energy. The intended action has been stated clearly in all the campaign materials that they want the residents to change their light bulbs. The brochure, in detail, also provides steps as to how the actions can be carried out. The campaign project did not target anything else but the actions with wordings and visual images. Even though the framing of attributes can also be found in some news releases, it is not as apparent as the framing of actions. The BMA positioned this campaign as a way to communicate the policy of energy consumption care to the residents. They tie this particular action to the issue of global warming.

BMA Selected Campaigns	Public Relations Frames	Key Words	Visual Images
Use Cloth Bags Instead of Plastic Ones	actions	use cloth bags, use less plastic bags, save world	cloth bags with BMA and partners' logo, green background
Reduce Garbage	attributes	BMA duty	BMA garbage bins, garbage truck
	actions	separate garbages, put in right bins	bin signs, BMA officials and bins
Earth Hour	situations	global movement, 60-minute black out	number 60, Earth, black background
	actions	switch off light, indicated time, designated location	switch, celebrity ambassador, shopping malls
Change Light Bulb	actions	change, save energy, save money	light bulb package, BMA and MEA logo together

Table 7 Campaign Frames, Keywords and Visual Images

4. BMA Global Warming Campaign Frames

The BMA has been the active unit in promoting the global warming issue since 2007 particularly after its Declaration of Cooperation on Alleviating Global Warming Problems. Five strategies have been highlighted to mitigate the problem of global warming, namely reducing energy consumption, supporting other sectors in reducing GHG emissions, promoting the sufficiency economy lifestyle, promoting GHG absorption activities, and building public awareness and knowledge. The last strategy attempts to target residents in Bangkok. The selected campaign materials reveal the frames they use in the hope of people learning more about the issue and realising its problematic consequences.

To answer RQ1, three major frames emerged from the campaign from both primary and secondary documents. The frames presented are those repeated in all four campaigning projects through key words in messages, photos, and activities included in the campaigns.

4.1 Finance Frames

This frame can be seen most frequently in all four selected campaigns. Global warming is framed as an economic issue both at the national and household levels. However, only selective choices of actions are provided in campaign projects such as 'replace plastic bags with cloth bags', and 'change the light bulb' to use the ones certified by the Ministry of Energy. This can also be viewed as a pro-consumption framing strategy as they use pro-consumption messages to address environmentally responsible economic consumption behaviour in a highly selective manner.

Financial frames can be gleaned from the slogans and the names of the projects including phrases such as 'reduce to save' and 'pay more for using plastic bags'. Moreover, some activities are geared toward financial gain. For example, the collaborative project with Channel 3 TV, to organize a cloth bag contest offers the winner money and a token of appreciation. The event is held one month before Earth Day to raise awareness. The cloth bag campaign offered 'more than 30,000 complimentary cloth bags' – an offer of free products in a manner similar to product promotion.

4.2 Authoritative Frames

This frame can be seen when BMA uses global warming as a rationale for issuing an authoritative order. The use of commanding tone and scientific and technical information in bombarding the audience with global warming messages can give legitimacy to the local government and make citizens, who have been made to feel they are bad citizens, more amenable to directional messages. In sum, the global warming threat may be used by government to control citizens.

The use of the top-down style of communication and commanding sentences reflects the authoritative frame used in BMA campaigns. For instance, the project names start with verbs such as in 'reduce use of plastic bags', 'reduce garbage' and 'stop global warming'. No subjects, such as 'we' or 'us', appear in any slogan. This reflects the authoritative frames used to communicate in a top-down manner. Major companies to be models for household practice always initiate the global warming campaign projects. Instead of directly communicating with citizens, the BMA employs these well-known companies as role models for their prescribed behaviour such as in the pilot

projects for reducing garbage in shopping malls (e.g. Lotus, Carrefour and Central). Global warming information is served and fed by authorities to communities and digested by the latter rather than being developed by communities as community-based knowledge.

Moreover, most of the news releases start with the names of high-ranking officials who urge citizens to participate by doing something. The repetition of certain names in the news makes people familiar with them as well as helps create a better image for the environmental issue. This particular strategy is also known as 'green-washing', one used by various groups such as government entities, politicians and political candidates, trade associations, and corporations attempting to demonstrate environmental commitment to create a pro-environmental image (Arjanniko & Rosev 2007). The former governor, Mr. Apirak Kosayothin, has faced accusations of corruption and has drawn media attention even after his tenure (Thip-Osod, 2011; Ongkulna, 2011). Therefore, critics might argue that this is a good way for him to tie his name to global warming and be seen as an environment lover who cares for both the earth and its people while diverting attention away from the accusations. The use of the names of officials emphasises their higher status over ordinary citizens who are framed as the passive audience in this authoritative frame. Global warming is also associated with the building of the green image or environmental responsibility of business companies. The win-win situation for these partnerships in global warming declaration seems to result in a loss of true participatory communication for the citizens of Bangkok.

4.3 Lifestyle Frames

BMA global warming campaigns have provided many activities and suggestions as to how to alleviate the problems. Still, these events and information materials are only available to certain groups of people. The issue has been framed as the way to show how urban people should care about the environment despite their daily excessive consumption and production of garbage (Strategy and Evaluation Department 2008). Global warming has been framed as an urban cause – one for those who want to be ‘cool’ to espouse rather than being the burden of all and sundry. This is reflected in a campaign emphasising the use of global warming rhetoric as an urban middle class discourse thereby making the espousing of long-lasting sustainable behaviour fashionable. The lifestyle frame can be seen from the way campaign projects have aimed at working people in the financial district and college students in the central areas of Bangkok. They are mentioned in the BMA news releases as well as captured in the follow-up event photos. The selected locations for activities are mostly around the centre of the city where most of the high-end shopping malls and trendy spaces such as MBK, Siam Square, Central World, and Emporium are found. Nearby and conveniently located parks such as Lumpini Park and Benjasiri Park are also selected. The criterion for this choice is the ease of attracting participants from the commuting workforce. It is also easier for the press to join the activities in central areas. News media coverage offers the secondary materials of the campaigns. The selection of locations suggests a focus on the middle class workforce rather than on other groups.

The photos from the events or any press conferences only capture the well-known figures and attractive faces. Actors and actresses are invited to join the events to draw in the media and influence public opinion. The use of celebrity figures to represent

brands and organizations is prevalent throughout Thailand. It has somehow become the norm to invite celebrities to campaign events regardless of their position vis-à-vis the campaign issue. Their appearances make it more attractive to the audience to follow their advice or action. These people lead 'cool' lifestyles in the public eye. In addition, the target audience members are those who place great emphasis on personal lifestyle, particularly those considered unique and appealing. This is in addition to doing good deeds in terms of social contribution. Being 'green' ticks all these boxes. Celebrity association adds to 'green' being perceived as 'cool'. For example, the use of cloth bags made by famous figures can make one look both cool and caring as a good environmental citizen. Even the Earth Hour campaign, which was originally aimed at encouraging ordinary citizens' participation via the Internet and local community networks, has been distorted in Thailand. The one-hour blackout has become an excuse for a gathering of celebrities whose photos are released afterwards and this has the potential to become an event in which the target audiences can participate with the celebrities. In this case, the BMA together with WWF Thailand has the intention of making it into the talk of the town. However, the strategy is being redirected to target the upper and middle classes in the centre of Bangkok and exclude others living in the city.

Global Warming Frames	Metaphors	Historical Lessons	Catchphrases	Depictions	Visual Images
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Financial Frame	global warming as a cost	More money was saved and will be saved.	save money; save the world	richer person; richer city; richer nation	campaign premium products, numbers
Authoritative Frame	global warming as an order	Good order will lead to better society as developed ones.	do what we tell you; things will be better	obedient citizens	high rank officials, imperative signs
Lifestyle Frame	global warming as a middle-class trend	Middle-class is respected in urban society.	Cool people; cool the world	cool lifestyle with environmental friendly behaviors	celebrities, downtown area, hip graphic

Table 8 Global Warming Frames and Framing Devices

4.3 TARGET AUDIENCE MEMBERS' FRAMES

Introduction

This chapter reports the results obtained from the quantitative approach to examine the frames held by the target audience members of the Bangkok Metropolitan Administration's global warming campaigns. The main purpose of this chapter is to answer RQ3: 'What were the global warming frames in the minds of target audience members (TAM) before and after the campaign?' Different variables were set up to investigate the relationships between frames and other aspects of campaigns' target members including zoning, campaign influence, media use, concern, and behaviours. The first part includes the research questions and hypotheses that shape the questionnaire organization. This part also lays out the use of statistical analysis with different variables and relationships for better understanding of the following parts. The findings are separated into descriptive statistics describing the basic information on frames held and the inferential statistics explaining the relationships between the variables identified in research questions and hypotheses. The final part is the discussion of the findings within the Thai traditions and environmental contexts.

1. Research Questions and Hypotheses

To answer the research question focusing on the target audience members, statistical analysis formula were employed. From RQ3: 'What were the global warming frames in minds of target audience members (TAM) before and after the campaign?', hypotheses were posted to specifically examine different variables including

respondents' demographic profiles, the respondents' perceptions of BMA campaigns, and their reported global frames held before and after the campaigns.

The descriptive statistical findings cover the demographic results such as residential zoning, age, gender, education, career, income and marital status. These are the criteria BMA use to categorize their target audience. The demographic profiles can be useful in inferential statistical analysis to identify whether they are correlated with other variables, particularly frames held by the respondents. However, in the questionnaire, this part is contained in the final section as the profile is the basic information of the respondents and requires less thought to fill out. The details are reported first to give an overview of the respondents.

The survey also asked the respondents to report their perceptions of BMA global warming campaigns including their views on characteristics as well as their opinions on campaigns' effectiveness and influence. The respondents were asked for their suggestions regarding global warming campaign development as well. The next part addressed their reports on the frames held before and after the campaigns. This was self-reported data. This section was checked for validity by 10 communication scholars qualified to act as doctorate supervisors, while the reliability was checked in the pilot survey ($n=30$). To achieve a high value closer to 1.00, four questions were deleted out of 26. Moreover, the scholars suggested that six questions could be omitted due to their ambiguity and redundancy. Therefore, five questions were asked under the scientific, and economic and political frames. In the section for social and cultural frames, there were six questions leading to a combined total of 16 questions in the final survey.

The frames held before and after the campaigns were assumed to be related to different factors such as residential zoning, campaign influence, media use, global warming concern and the respondents' behaviors. Therefore, inferential statistical analyses were employed to figure out their correlations. From the previous research and the BMA campaign strategic plan, the hypotheses were posted to test the relationship between frames and other factors. T-Test and ANOVA were used to test the hypotheses as listed below:

H₁: The social and cultural frames would be most common among Bangkok residents

H₂: There was a difference between frames held before and after the campaigns

H₃: There was a correlation between geographic zoning groups and reported frames

H₄: There was a correlation between concern priority and reported frames

The table below demonstrates the quantitative result report including the research questions, hypotheses, and data output.

Research Questions / Hypotheses	Independent Variables	Dependent Variables	Statistical Analysis Tools	Output
RQ 2	- Scientific Frames - Political and Economic Frames - Social and		Descriptive Analysis	Mean Mode Median Std. Deviation

	Cultural Frames			
H1	- Scientific Frames - Political and Economic Frames - Social and Cultural Frames		Mean Comparison	Max Min
H2	Frames held Before the Campaigns	Frames held After the Campaigns	T-Test	Value of Difference Value (<i>P</i> -value of < 0.05)
H3	Residential Zoning	Frames held Before and After the Campaigns	ANOVA	Difference Value (<i>P</i> -value of < 0.05)

Table 9 Research Questions, Hypotheses and Statistical Analysis Tools

Bangkok residents were sampled as representatives of the BMA's target audience. A questionnaire was distributed face-to-face at public venues such as department stores and public parks allowing for voluntary survey completion. A Human

Ethics consent form was first provided. However, due to the limited time available on the part of the participants, the distributor briefly read the consent form to prospective participants explaining that voluntary completion of the survey would be proof of consent. Quota sampling was used to collect data from the respondents based on city zoning. The BMA has divided Bangkok into 12 zones in accordance to space utilisation and development plans – including financial, industrial, and old city zones as shown in Figure 1 (Department of City Planning, Bangkok 2005). As concerns having different interests, the people from each zone might have different reactions towards BMA global warming campaigns leading to differences in frame holding. Therefore, in RQ2, the third hypothesis (H_3) predicted that there was a difference among the frame scores reported by geographic zoning groups.

The questionnaire was designed to reveal the frames that respondents held using self-recall and self-reporting processes. To ensure the recognition of the campaign, a screening question was posted at the beginning of questionnaire asking if they had heard about the BMA global warming campaigns. In addition, the photos and messages from each campaign were attached to help respondents recall. The questions were developed based on the previous literature on climate change frames (Malone 2009; Nisbet 2009; Shanahan 2007). They were trisected into: 1) scientific⁶, 2) political and economic⁷, and 3) social and cultural⁸ frames. The questionnaire organization and outline were designed to help respondents recall the campaigns and

⁶ e.g. Global warming is the extreme change of weather in different areas; global warming causes melting ice in the North Pole.

⁷ e.g. Global warming is not only a problem for developed countries but also Thailand; industrial development is the main cause of global warming.

⁸ e.g. Global warming reflects the cycle of karma created by human beings; everyday activities contribute to the causing of global warming.

to compare their frames before and after exposure to the BMA campaigns. The 16 questions were in the Likert-scale format ranging from 1 (totally agree) to 5 (totally disagree). The participants were also required to fill in the data comprising their demographic profile.

2. Descriptive Statistical Analyses Report

There are three major sections in the descriptive statistical report: 1) demographic results, 2) campaign results and 3) frame results.

2.1 Demographic Profile Results

A total of 400 respondents were divided by zoning on the BMA map as shown in Figure 2. In only two zones were 35 respondents collected, namely 2 Lumpini and 3 Vibhavadi, while in the rest 33 respondents were obtained from each zone.

Regarding the age range, most respondents were 26-33 years old ($n=129$) followed by 34-41 ($n=107$). Ages 18-25 years and 42-49 were third and fourth respectively ($n=65$, $n=52$). Groups then followed with similar amounts of respondents for 50-60 years and under 18 ($n=20$, $n=18$). Only a few respondents were aged over 60 years ($n=9$).

There were more female respondents ($n=259$) than male ones ($n=139$). Only a small amount ($n=2$) identified themselves as neither.

Respondents educated to bachelor degree* level participated in the questionnaire the most ($n=203$). Next were respondents who had finished elementary and/or high school education ($n=76$). This group could also include those still currently

* Based on Thailand's educational system, a Bachelor's Degree from university is equivalent to four years of study or more while a diploma or college certificate refers to a shorter course. Vocational certificates refer to a specific degree for professionalism and craftsmanship.

studying at this level. Those who had received diplomas or college certificates came third ($n=54$). Lastly, there were similar numbers of respondents with master degrees and/or higher and those with vocational certificates, respectively ($n=36$, $n=31$).

A list of careers was provided for the respondents to choose from. Only a few ($n=4$) recorded their jobs in the blank provided (e.g. freelance). Most of the respondents identified themselves as company employees ($n=229$). Respondents then reported themselves as students ($n=54$), personal business ($n=45$), and governmental officers ($n=30$) in respective order. Those who identified themselves as unemployed, housewives and as retired were the least ($n=20$).

Most people reported their incomes as between 10,001-20,000 baht per month ($n=158$). This was followed by incomes of between 5,001-10,000 baht per month ($n=85$), 20,001-30,000 baht per month ($n=58$), and more than 40,000 baht per month ($n=46$). A similar number of respondents reported their incomes to be under 5,000 baht per month ($n=28$), as those did for 30,001-40,000 baht per month ($n=25$).

The last demographic profile question included in the questionnaire was that concerning marital status. Most respondents identified themselves as single ($n=230$), followed by those reporting themselves as being married ($n=148$) and then a few as being divorced or separated ($n=21$).

2.2 Campaign Results

In the questionnaire, four main sections of questions asked about the respondents' opinions on the BMA global warming campaigns. The respondents were asked to rate the statements using the Likert scale. Each section had a different set of

labels such as most disagree to most agree, very good to improvement needed, change most to no change, and the most to the least.

The first section was aimed at gaining insights into how they think about the campaign characteristics. Different aspects were included in the questions such as its attractiveness, its information provided, its encouragement to learn more about global warming, its promotion for behavioral change, its being part of a voting campaign for the governor, and its image building for BMA. The campaign characteristic that received the highest score was its attractiveness (mean 4.13, $n=400$), while the lowest score was its being part of a voting campaign for the governor (mean 3.15, $n=400$).

The second part asked about their opinions on the effectiveness of the BMA global warming campaigns by giving a list of success measures in helping individuals and society. The questions included six dimensions of campaign effects ranging from attracting people's attention, informing, encouraging people's participation, pushing global warming to become part of national agenda, solving global warming problems, and being part of the global warming trend. The scores were very similar in all categories (mean=3.63, 3.67, 3.66, 3.52, 3.55 and 3.59, in respective order; $n=400$).

The next part of the self-reported opinions on campaigns addressed the effects of campaigns on the respondent as an individual. Statements were provided for them to rate as concerned whether they had changed most or not at all by circling number 5 for most change and 0 for no change. The statements included whether they knew more about global warming, whether they thought global warming was an important issue, whether they wanted to learn more about global warming, whether they did anything to reduce global warming and whether they supported the work of BMA on global warming

issue. The highest score was the change to thinking that global warming is an important issue (mean=4.04, n=400) while the rest of scores were very similar. Their wanting to learn about global warming was a bit higher (mean=3.81, n=400) than the rest of the three changes including the supporting of BMA's work (mean=3.58), doing something to reduce global warming (mean=3.54), and wanting to know about global warming (mean=3.51).

The last section on the opinions on BMA global warming campaigns asked for the respondents' suggestions as to how urgently each element should be changed. The thing they wanted the BMA to change most urgently was to build more relationships with the communities (mean=4.30, n=400), while the least urgent matter was the change in messages (mean=3.56) and the change in celebrities or star ambassadors (mean=3.56). The other changes covered have more interesting activities (mean=4.24), use different channels of media (mean=4.21), and change the presentation style (mean=3.66).

2.3 Frames Results

There were three major categories drawn from previous literature (Malone, 2003; Nisbet, 2009): 1) Scientific Frames, 2) Political and Economic Frames, and 3) Social and Cultural Frames. The respondents were asked to rate whether they most agree (5) to most disagree (1) with the statements within each frame. There were originally 22 questions. After the pilot survey (n=30), however, the reliability test led the researcher to reduce the questions to 16, comprising 5 for scientific, 5 for political and economic and 6 for cultural frames. The respondents had to rate the score for both before and after the global warming campaigns.

First, the scientific frames comprised five statements: 1. Melting ice is due to the higher and warmer temperature; 2. Ozone depletion is due to greenhouse gas emission; 3. Many extreme weather changes occur all around the world; 4. There is a lack of scientific knowledge and solutions to handle the problems; and 5. The global warming issue needs new knowledge and advanced technology to create understanding and solutions. The highest score before the campaign was extreme weather changes (mean=4.15), while the lowest score was for the lack of scientific knowledge (mean=3.85). The same score trend also appear for after the campaign with the highest score for extreme change (mean=4.44) and the lowest for lack of scientific knowledge (mean=4.18).

For the political and economic frame, there were five statements, namely: 1. Global warming is not only the problem of developed and rich countries, but also Thailand; 2. The responsibility to solve global warming should not solely be put on those industrial countries that release greenhouse gases the most; 3. The main cause of global warming is material and technological development, especially the manufacturing process; 4. Global warming is caused by the development of urban society; and 5. International collaboration is important to solve global warming. In the before the campaign part, the respondents rated international collaboration as having the highest score (mean=4.12). The lowest scores came from the global warming as problem of developed countries and Thailand (mean=3.95) as well as global warming not being the sole burden of developed countries (mean=3.95). In the after the campaign part, the same trend also occurred with collaboration getting the highest score (mean=4.45) and the lowest scores being those of global warming as a problem

of developed countries and Thailand (mean=4.27) and global warming as not the sole burden of industrial countries (mean=4.27).

The last part was related to the cultural and social frame and consisted of six statements: 1. Global warming is a normal natural change; 2. Global warming is the conflict between human beings and nature; 3. Global warming is a test for human beings to deal with nature; 4. Global warming reflects the deeds done by human beings; 5. Global warming leads to natural disasters and, ultimately, the end of the world; and 6. Everyday activities cause global warming. In the before the campaign part, the statement about everyday activities causing global warming received the highest score (mean=4.04) while the rate of global warming as a normal natural change received the lowest (mean=2.85). In the after the campaign section, a similar trend was evident as everyday activities received the highest score (mean=4.41) and the normal natural change the lowest (mean=3.12).

After summing up the total scores from each frame category, the highest scores were evident in the scientific frame after the campaign (mean=4.33, n=400) and the lowest scores in the social and cultural frame before the campaign (mean=3.57, n=400). The table below shows the total score from each frame category both before and after the campaigns.

	Scientific Frames Before Campaigns	Scientific Frames After Campaigns	Political and Economic Frames Before the Campaigns	Political and Economic Frames After the Campaigns	Social and Cultural Frames Before the Campaigns	Social and Cultural Frames After the Campaigns
N	400	400	400	400	400	400
Mean	4.02	4.33	4.01	4.33	3.57	3.91
Median	4.00	4.40	4.00	4.40	3.50	4.00
Std. Deviation	.64	.57	.66	.58	.67	.67

Table 10 Statistical Values of Target Audience Members' Frames

As for the section for the global warming frame, there were also open-ended questions asking the respondents to write the words or images they associated with talking about global warming. There were 269 respondents who wrote words associated with global warming issues and 247 answers for images when talking about global warming. The most common words were 'flooding' and 'disaster'. The most common images were 'hot sun' and 'disaster'.

3. Inferential Statistical Analyses Report

For the main RQ2: "How did the existing frames work on Bangkok target audience?", the researcher has also proposed three hypotheses: H_1 : The social and cultural frames would be most common among Bangkok residents; H_2 : There was a difference between frames held before and after the campaigns; H_3 : There was a correlation between geographic zoning groups and reported frames. Descriptive statistical analysis was used to test H_1 : The social and cultural frames would be most common among Bangkok residents, and H_3 There was a differences among frames scores reported by geographic zoning groups, while inferential statistics were applied to

the data set to test H_2 . There was a difference between frames held before and after the campaigns. A P -value of < 0.05 was considered statistically significant.

To test H_1 , the mean scores were used to compare how respondents rate the frames used to describe global warming because the mean score can reflect how they rate all the sub-variables of each main frame. Respondents ($N=400$) held scientific frames the most both before (mean = 4.02) and after (mean = 4.33) the BMA global warming campaigns according to their self-reported data. The second highest scores were political and economic frames both before (mean = 4.01) and after (4.32). The least reported were social and cultural frames before (mean = 3.55) and after (mean = 3.91). The findings show that H_1 was null as the frames most commonly held were scientific and not social and cultural ones as predicted. This could be due to the use of scientific evidence in the media to discuss the issue as reported in other countries (Hulme 2009). Traditional Thai beliefs such as those associated with the Buddhist prescription for individuals to live in balance with nature may not be the dominant frames in city areas where people seem to concentrate more on earning money and buying goods and services to satisfy consumption needs.

H_2 was tested by use of t -test with a two-tailed test to compare the scores of frames held before and after the campaigns. The null hypothesis is rejected, since there was a significant value of difference ($p = .000$) in all pairs from the 16 items of three main frames. This shows that the respondents scored each frame differently after the BMA campaigns. Nevertheless, the direction of scores was not considered here because higher or lower scores of frames did not really signify any particular frame value. The items did not contain any negative or positive value within.

The application of one-way ANOVA was used to test H_3 to see the differences among three main frames before the campaigns and three main frames after the campaigns from 12 zones. The independent variables were zoning groups while the dependent variables were the 6 frame scores. With quota sampling, from the total of 400 respondents, 33 people were collect in each of 10 zones while 35 people were collected in each of 2 zones. The results showed that the respondents from different zones reported different scores for each frame ($p = .000$) both before and after the campaigns except for only one frame – the political and economic frame before the campaigns ($p = .013$). Figure 2 shows the output of the ANOVA test in detail. The Scheffe test was used to find out the post hoc comparisons. Significant differences occurred among Zones 1, 9 and 12 in reporting scientific frames after campaigns as well as Zones 9 and 11. In reporting the political and economic frame after campaigns, Zones 1, 9 and 12 also showed significant differences. Zones 1, 9 and 12 were different in reporting social and cultural frames before the campaigns but Zones 1, 4, 6, 9, and 12 were different in the same frames after the campaigns.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
science	Between Groups	15.747	11	1.432	3.693	.000
	Within Groups	150.391	388	.388		
	Total	166.138	399			
science_af	Between Groups	17.060	11	1.551	5.277	.000
	Within Groups	114.024	388	.294		

	Total	131.084	399			
pol_eco	Between Groups	10.260	11	.933	2.208	.013
	Within Groups	163.932	388	.423		
	Total	174.192	399			
pol_eco_af	Between Groups	17.656	11	1.605	5.270	.000
	Within Groups	118.162	388	.305		
	Total	135.818	399			
soc_cult	Between Groups	18.928	11	1.721	4.215	.000
	Within Groups	158.400	388	.408		
	Total	177.328	399			
soc_cult_af	Between Groups	19.015	11	1.729	4.167	.000
	Within Groups	160.967	388	.415		
	Total	179.982	399			

Table 11 ANOVA Test Results

One-way ANOVA was used to test H_4 to see the differences among three main frames before the campaigns and the three main frames after the campaigns from the six priority concerns of self and family, community, Bangkok, Thailand, world citizens, and nature.

From the descriptive analysis of the question regarding concern – “When talking about the global warming issue, what is your major concern? Please rank from most concerned 1 to least concerned 6.) The first major concern rated by most respondents was ‘nature’ (41%, n=400). The second major concern was ‘self and family’ (28%)

followed by 'world citizens' (19%), Thailand (7.8%) and Bangkok (3%). The least rated major concern was community (1%).

After applying ANOVA to find out the correlation between frames held and the major concerns, it turned out that there was no significant difference among the respondents who had different major concern and the frames they hold. As shown in the table below, the p value was higher than 0.05 – the value set for the level of significance.

Research Questions/ Hypotheses	Results	Statistical Report
RQ 3: What were the global warming frames reported by target audience members before and after the campaigns?	Scientific Frames	The scores are the highest before mean = 4.02 after mean = 4.33 N = 400
H1: Social and cultural frames will be the most common frames reported by target audience members.	Null hypothesis accepted	The scores are the lowest before mean = 3.57 after mean = 3.91 N = 400
H2: There was a difference between frames reported before and after the campaigns.	Null hypothesis rejected	$p = .000$ in all pair of 16 items

H3: There will be a correlation between geographic zoning and frames reported.	Null hypothesis rejected	$p = .00$ in all comparisons except political and economic frame (0.13)
H4: There will be a correlation between concern priority and frames reported.	Null hypothesis accepted	$p > 0.05$ in all pairs

Table 12 Research Questions and Answers from Results

Summary

The survey revealed that the most common frame among target audience members was the Scientific Frame. The members also reported associations with negative words such as flooding and disaster when thinking of global warming. The inferential statistics demonstrated the relationship between the respondents from different zones and their frames held. Moreover, no relationship was found between major concerns and the frames held.

CHAPTER V

INTEGRATIVE ANALYSIS

Introduction

The integrative analysis and the discussion of the findings are included in this chapter. The frames found from three main data sources are first discussed. Comparisons among them are made to see the common frames and the atypical ones to discuss the effectiveness of the BMA global warming campaigns. In the final part, a discussion of the overall findings is provided based on the previous theoretical and methodological studies and Thai context.

1. Integrative Analysis: Similarities and Differences among Frames

This section answers Research Question 4: “What are the relationships among the expert private frames, the campaign frames, and the target audience members’ frames on global warming in Thailand?”. The frames are compared to point out the commonality and the dissimilarity. This demonstrates the consistencies or discrepancies indicating the flow of frames used in the global warming communication of BMA campaigns.

1.1 The Similarities: Global Warming as a Problematic Issue

In order to answer RQ 4, the frames emerging from the campaign materials and reported by respondents are compared and contrasted to find similarities and differences. One major commonality is the casting of global warming as a financial or economic issue. The main difference is the scope of the frame presented in campaigns is narrower than what has been reflected in the respondents’ survey answers. This

difference implies the attempt by local government to make people feel that the issue is 'close to home' while citizens still feel remote from the problem themselves. Table below shows the list of frames and keywords found from all data sets.

Framing Sources	Main Frames	Keywords of Frames
Experts' Private Frames	Social Frame	Equal access to knowledge Social injustice
	Environmental Frame	Polluted surroundings Environmentally-friendly behaviour
	Spiritual Frame	Pure nature Balance of human and nature
BMA Global Warming Mediated Frames	Political and Economical Frames	International relations Country development
	Social and Political Frames	Philosophical principles Religious beliefs
	Lifestyle Frames	Hip environmentalists Middle-class lifestyle
Target Audience Members' Reported Frames	Scientific Frames	Scientific evidence Objective information
	Political and Economical Frames	International relations Country development
	Social and Political Frames	Philosophical principles Religious beliefs

Table 13 List of Frames and Keywords

The major similarities are how all frames portray global warming as a problematic issue that needs to be fixed. It is the issue that seems to be related to many other problems nationally and globally. The problems do not restrict to the environmental context. In fact, from the frames studied, any problems occur in society can be related to global warming issue ranging from household lifestyle to national policy. Even though all frames identify global warming as a problem, they do not bring about the same definitions nor solutions. Apparently, all frames negatively view global warming issue. It

is not described in a positive frame at all. It can be concluded that all the frames are similar as they are all negative frames toward global warming issue.

1.2 The Differences: Definitions and Solutions of Global Warming

The differences, however, can be seen in the scope of frames shown in these three data sets. The frames found from the campaign materials tended to be narrower and closer to the target audience members than the frames reported by the audience and the experts. It is interesting to note that the local government has attempted to relate global warming to daily activities such as changing a light bulb, reducing garbage and desisting in the use of plastic bags. However, this was not shown in the target audience members' survey answers. The experts' interviews also reveal the broader frames used in social level as reflected in social frame.

The solutions for all three frames are distinctively different. The first frame drawn from experts' interview assert that global warming issue should be fixed from social level. This should be done by distributing knowledge evenly to people. The scope of this frame is the broadest when compared to the other two. The next frame or financial frame from the campaign seems to be the narrowest as it related global warming issue to the financial problems and pointed that money can be the solutions for this problem. Lastly, the dominant frame from publics or scientific frame seems to be in the middle range. The descriptions and solutions rely on scientific thinking and terms.

This might be due to the media portraying global warming and climate change as scientific issues referring to sources from scientific institutions such as the National Environmental Institution and related Ministries. This may also explain why the greenhouse gas emission rate is still increasing, as people are not aware of their

responsibilities in global warming mitigation. They know what and how important global warming is guided by the local governmental campaigns but take no action. Another reason is they entertain doubts about the government's prescriptions. Most of the activities promoted in BMA global warming campaigns are based on familiar environmental friendly habits such as preserving energy and reducing garbage. Everyone should already know about the recommended behaviour. Therefore, these activities are not strong enough to attract attention or even make people change their behaviours, as they do not link global warming to the daily life included in social and cultural frames as high as other variables in the two other frames. The campaigns could successfully bring about awareness because the score level of knowing the issue as reported by respondents is high (100%, n=400). Nevertheless, according to the BMA campaign plan in 2007 (Environmental Department, 2007; Bangkok Metropolitan Administration 2007), this is the result they hope to see from the first phase of the campaigns. Yet, it is not sufficient to reduce the gas emission as expected by the National Economic and Social Development Board (NESDB, 2010).

Table 14 Comparisons among Global Warming Frames

Global Warming Frames	Differences	Similarities
Social Frame	- Global warming is social problem.	- Global warming issue is human related. - Global warming problem can be fixed.
Financial Frame	- Global warming requires more financial support.	

Scientific Frame	- Global warming is scientific based.	
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2. The Most Common and Suggested Frame

From the data analysis and the interview with the experts, it turned out that the most common and suggested frame to be used in global warming campaign in Thailand was a frame mixed with science and Thai values. The Thai values here include Buddhism and the sufficiency economy philosophy. This is the combination of existing frames that most Thais already have and will make it easier for them to understand the problem well enough to change their behaviours.

The mixed frame can be used to target the Thai audience who are familiar with traditional concepts of Buddhism and King's Philosophy. Since, from the survey, it turned out that majority of them used scientific frames to describe global warming, it would be easier to take advantages from this particular point. The traditional value can be added to the scientific information to make it more reachable. The Buddhism concepts that are suggested by most of the experts are the concept of Karma or deed. This generally refers to the phrase "what goes around comes around". This concept together with the scientific information will help to highlight the causes and consequences of global warming that it is human related problem. The interrelation of past, present and future from this concept will stress the importance and urgency of this matter. The scientific frame alone may not be able to strike audience hard enough to turn around and start doing something. For the King's Philosophy, it has been raised up by almost all of the experts. Even though this thesis survey did not show that most

audience use cultural frames to communicate global warming, this concept is widely known and has been promoted continuously. The financial frame from the campaign can be used to combine with this philosophy to instigate the perception of sufficiency in economic wise. The philosophy does not go against consumerism, but in fact it reminds people to spend with conscious. Combining financial frames with this philosophy can yield frame of 'stop global warming with sufficient economy; use less to save more'. Since people already know what Sufficient Economy is and all need to save money as much as possible, it is recommended that this should be used as a frame to communicate with Thai people in hope that it should be able to encourage action change.

If public relations is defined as the process of establishing and maintaining mutually beneficial relations between an organization and the public on whom it depends (Cutlip, Center, & Broom, 1995), the establishment of common frames of reference about topics or issues of mutual concern is a necessary condition for effective relations to be established (Hallanhan, 1999). Therefore, this integrative analysis section discusses the consistency among the frames found. This helps to evaluate the effectiveness of the campaign projects run by the BMA and to identify the frames that should be used in the re-framing process. However, it can be seen that the consistency of frames among all three elements from global warming campaign communication process is not strong. All hold their own frames toward global warming. For example, while BMA tries to portray global warming as financial problem, people see it as a scientific issue. As a result, the change of action is very low reflecting in the increasing GHG in Bangkok area. Moreover, the social frame can be drawn from experts interview

but not dominant among target audience members. This can be the reason why people do not really understand the situation well enough. Thus, they do not change their behaviours to prepare for global warming consequences. It is possible that if the frames consistency are strong, the global warming situation should change in a better direction.

The message creators or framers (Hallahan, 1999) in this study refer to the experts and the campaigners. However, based on the two-way communication process in Excellence Theory proposed by Grunig et al. (1994), the messages are co-created within the dynamics. Therefore, the mixed frames can be developed not only by the campaigners, but they also need to evaluate the feedback from the target audience members to see which exact frames should be used to communicate global warming issue. It might create the confusion if attempting to combine everything into one frames. The campaigners or frame source should selection important element from different frame to create a better new one. The target audience members' frames are also important to re-check whether the communicated frames are perceived as they should be. From this study, it can be seen that no matter how the campaigners try to control the message, it does not necessarily means that the audience will passively receive the message. The two-way communication is very important in the process of frame building now that the global warming frames have been set in Thai minds.

Summary

After comparing and contrasting the three major frames found, it was found that the similarity is the framing of global warming as a problematic issue. All three major frames view global warming as a problem and something that should be fixed as soon as possible by everyone. The differences are how they define the problems and the

solutions. The social frame describes global warming as a human interest and social related issue. Thus, the solution must be to change the knowledge of people and create equal access to resources on the matter. The financial frame defines global warming as a cost bringing about losses for everyone. The solution must be how to reduce the cost from the economic approach. Lastly, the scientific frame views global warming through the lens of science and offers solutions using scientific techniques and environmentally-friendly behavior. The behaviour also reflects the idea of how humans can control nature through the technocratic perspective. The most common and suggested frame is the frame mixing science and Thai values. This frame is the combination of the existing frames held by most Thais.

CHAPTER VI

DISCUSSION

Introduction

This chapter will discuss the findings found from three methods listed earlier. The each discussion will talk about the possible factors that may yield the major frames found from different elements of campaign communication. The first part will be the discussion of why social frame is dominant among global warming experts. The next part will be the factors that may affect the use of financial frames in global warming campaigns of BMA. More factors will be discussed on their roles on building scientific frames on target audience. The final part of this chapter will discuss the integrative analysis results especially on the similarities and differences of frames found from three elements. The factors can be mainly influenced by the dynamics of Western and Thai campaign communication process, their perceptions on environmental issue and their traditional values of Nature.

1. Discussion of Results

1.1 *Experts' Frames (Social Frames for Global Warming Communication)*

The in-depth interviews revealed that the dominant frame held by global warming is the social frame. The keywords included 'not an environmental issue', 'social problem', 'human activities', and 'social injustice'. Even though the environmental frame was mentioned in all the interview scripts, it did not appear with high frequency and, most

importantly, it was not so salient in the conversations of the participants. The least common frame is the spiritual frame with the focus on nature as a whole.

It is probable that the experts use social frames due to their experience with the issue as a social problem. Most of them are approached to take part in political conferences, the environmental movement and as sources of information. Therefore, the dominant meta-frame is influenced by first hand experience.

The environmental frame is also used to describe the issue as well as to offer solutions. Global warming is widely known as an environmentally-related issue. Most of the time it has been associated with environmental deterioration such as pollution, garbage and excessive use of energy. Moreover, global warming has always been related to any kind of unusual weather events such as snowstorms in autumn, heat waves in spring and heavy rain in summer. This is also true of news media when they try to establish relationships between any catastrophe with global warming. It is likely that the experts also use this frame as much as the dominant one even though it is the secondary one.

The spiritual frame is the uncommon frame as found from the interview scripts. Even though it did not appear much, it shows that somehow the experts do make a link between global warming and nature in the sense of poetic discourse.

The roles of experts may also be an important factor in why they hold such frames. The interviewees came from four main sectors: government units, non-government organizations, international organizations and the media. Therefore, they might perceive their roles as relating to social work and human interest.

The perceived private frames they held may also be different from the frames expected by the public. As experts, people may expect them to think from a scientific perspective. In fact, the social frame was reported more. For example, one of the interviewees is a scientist, but he kept talking about how global warming reflected social injustice. The dissonance between perceived frame and expected frame could lead to the misunderstanding of the issue. When this inconsistency occurs, it can cause confusion when trying to communicate this particular issue. According to other scholars, this phenomenon is not surprising as the fragmented information of the global warming issue and climate change occurs in the realm of experts as well. It is not easy to find a common point of how to deal with global warming. A common frame is needed to strengthen the power to cope with the issue.

1.2 Campaign Frames (Financial Frame for BMA Global Warming Campaigns)

The analysis of selected BMA global warming campaign projects revealed that the financial frame was the most common frame compared to the authoritative frame and lifestyle frame. The metaphors included that between global warming and a time bomb. The historical lesson focuses on the previous loss of money on the global warming problem. The catchphrase was 'Stop global warming!' The depictions consist of an individual trying to save Earth from global warming with money. The visual images are fire on Earth, and BMA products such as light bulbs, cloth bags and bicycles.

The use of financial appeal is common in campaign communication especially in the capitalist system where money defines success. Many environmental campaigns use economic rewards to get attention from their target audience. For example, energy-saving campaigns mostly emphasise the idea of saving one's own money rather than

saving the planet itself. It is not a surprise to see that the financial frame emerges mostly in campaign materials because it is widely employed to encourage actions. Economic reward and punishment are tangible enough for lay people to grab the sense of what is to win and to lose. This is also true in urban and metropolitan areas where people put most of their focus on earning and spending money.

As the campaigns try to garner attention from the target audience, the financial frame is prominent. Nonetheless, the authoritative frame and the lifestyle frame reflect the campaign message towards the urban residents. The campaigns are considered to be successful in raising awareness but they cannot reach the action level.

Association of global warming with financial and economic problems also occurs in the international debate especially in the contributions of developed countries which frames global warming as potentially offering either a filling or being an obstacle to economic growth (Dessler & Parson 2006). This approach places more emphasis on the development of technology and the deployment of funds to solve the problem as in the carbon credit policy (Viherala 2008). When it comes to ordinary people, instead of encouraging them to use fewer resources, the government gives them the choice to consume in an environmentally-friendly way. In fact, the economic frame together with the scientific frame has become the dominant meta-frame of the global warming issue. Together they diminish the importance of the relationship between people and nature, thereby reiterating mankind's supremacy over nature (Brulle 2000). Thailand, as a part of global development, has also adopted the concepts as reflected in citizens' answers as well as in the campaigns. This somehow implies the influence of Western frames on Eastern development. The global warming issue, despite its physical global effects,

carries similar interpretation in different parts of the world. The process of globalization as suggested by Giddens (2002) is still evident. Developing countries seem to have less power in negotiating the meaning of certain debated issues such as climate change.

Financial or economic frames refer to the association of global warming to money, income, cost, loss and benefit concepts. The money frame as used by Shanahan (2007) can engage politicians and private sector organizations that are geared towards profit maximisation. The findings show that people in the Bangkok metropolitan area also think more about creating wealth. Particularly in developing countries, the wealth creation issue always has primacy over other problems when citizens (40.48%, $n=1646$) are asked about what they want from the government (Chalueysab 2011, p. 1). It is not surprising to see local governmental campaigns responding to this need by adapting their global warming message strategies to fit in a financial frame by emphasizing the saving of money rather than saving energy per se. In fact, both government employees and residents can be seen to belong to the same group when compared with citizens living in the other provinces especially those in rural areas where consumption need is not as high as in urban areas. Thus, it is possible that both the campaign makers and target audience members will hold similar meta-frames that inform their worldviews.

1.3 Target Audience Member Frames (Scientific Frame for Bangkok Residents)

Scientific frames became dominant frames among campaign target audience members even though the local government has tried to emphasize the financial aspects. This implies the influence of news media on self-reported frames because the scientific frames are widely used in the reporting of climate change and the global

warming issue (D'Angelo & Kuypers 2010). The scientific rationale conveys the idea of objectivity and distances the issue from the individual (Dessler & Parson 2006). Thus, when people view the global warming issue as science or a matter remote from themselves, they tend to ignore the relevance to their daily lives. This can help to explain why Thai citizens, especially those in Bangkok, recognize the issue but do not take any action. They see it as the issue of scientists, politicians and the Western countries rather than their own responsibility. Any behaviour promoted by BMA does not seem strong enough for them to create any change. As a result, no serious action is taken. Scientific frames are useful to communicate the knowledge of the global warming issue but not effective enough to change the public's actions to really mitigate the problem of climate change. Other frames should be tested with an experimental research design to see which frames can be used to stimulate action.

Frame contests with other sources who are also seeking their favoured treatment of a narrative should also be noted (Gamson, 1984; Ryan, 1991). The BMA is not the only organization that has launched global warming campaigns during 2007 to 2010. In fact, there have been many other organizations that have jumped onto the same bandwagon of climate change. It is likely that the target audience members will recognize the scientific information provided by many mass media outlets. This is shown in how they report their frames by mostly using the scientific frame rather than the political and economic Frame, and the cultural Frame.

2. Integrative Discussion

2.1 The Different Types of Frames

There are three major frames found in this study: the private frames, the mediated frames and the reported frames. They somehow compete among one another. Experts' frames can be considered as the 'source's favoured frame' (Hallahan, 1999, p. 228). It is likely that the inconsistency of favoured frames and perceived frames can lead to unsuccessful campaign messages. Frame contests within the communicators in the campaigns are also apparent when talking to experts and the communicators themselves.

Moreover, the intentional frames and communicated frames can be categorised according to how they are different. People tend to hold preferred framing (Hallahan, 1999) in order to understand a certain topic. In this case, the preferred framing can be that of the scientific frame because they might not see the global warming issue like other environmental issues such as forestry, and pollution. Exchanges between sources and journalists can be regarded as framing negotiations (Hallahan, 1999). The public relations frames and the emerging frames are not exactly the same.

The Dominant Frame: Influence from Western Societies

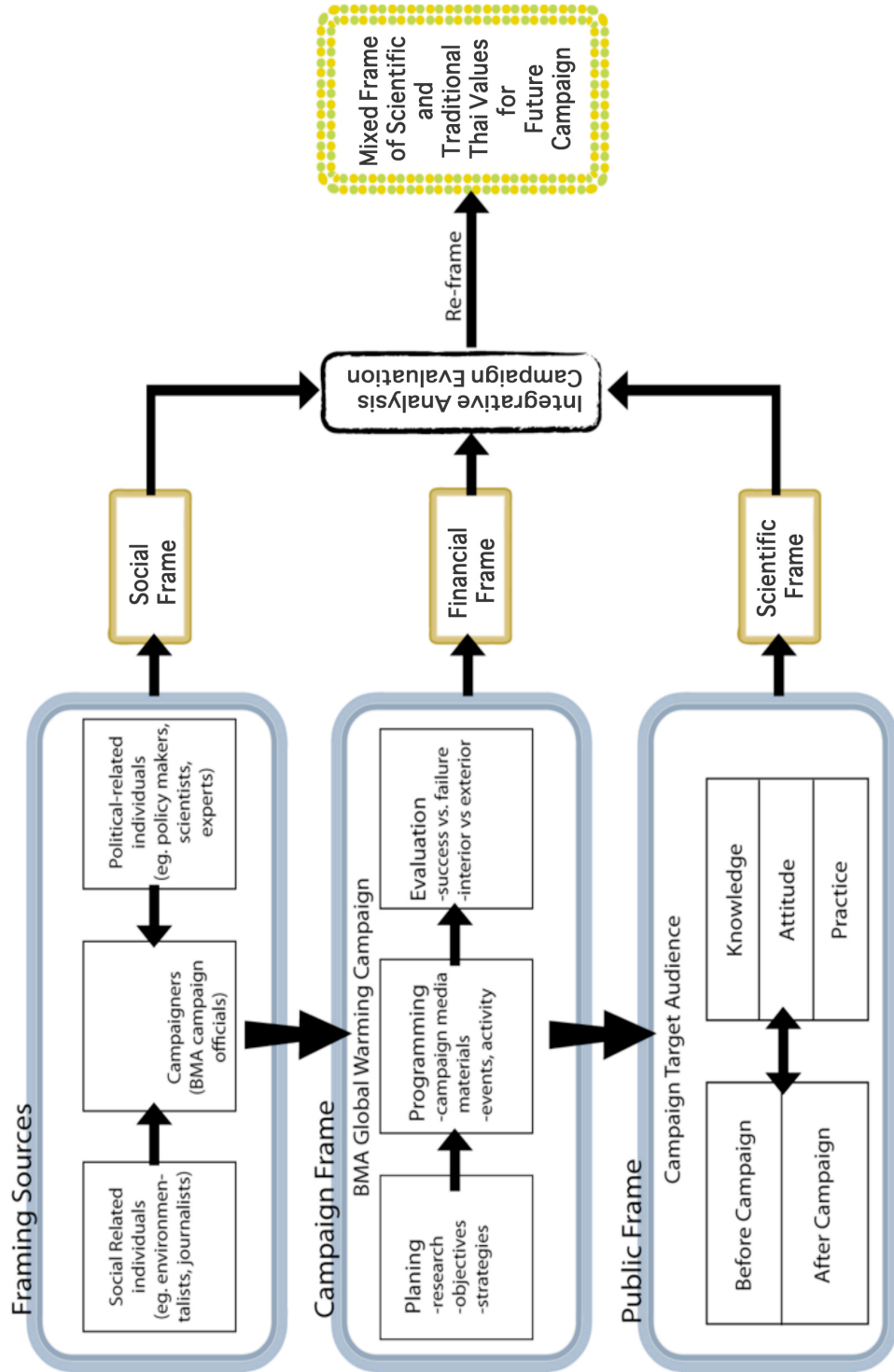
It is always true that when it comes to emerging issues in the global realm, the local units will receive the effects from the more developed countries. This has been going on since the era of Western colonization. A similar pattern of framing communication can be seen here. Most of the frames are similar to those reported in the literature. It is hard to neglect the power of Westernization even in the era of globalization. Even though the global warming issue can be considered a global issue, it does not convey the same meaning everywhere. This issue has been viewed as a crucial problem. Despite the different details of definitions and solutions to deal with the

issue, Thais seem to adapt many ideas from the West such as the way of thinking about the problem and how to solve the problem. The research has proved that Eastern thinking is less linear than Western. However, this might not always be true. When it comes to the urban areas as well as the global topic, anyone may view it the same way. This can be the result of globalization where the world is getting smaller and people tend to become more similar even in their ways of thinking.

The communicative frames also reveal that Thais at least have some thoughts on the issue. Therefore, that it is hopeless to wish for any change in Thai society cannot be confirmed here. The way of seeing the problem is slightly different among Thais than in the past, especially as to how they perceive nature. They are geared towards a technocratic perspective when they think they can control nature with scientific knowledge. The quality of nature is not how pure it is but how we can live conveniently within it. The frames of the global warming issue found emphasize the idea of human supremacy over nature. This is a sign that we cannot communicate with Thais with the expected green environmental frame but to through adding humans as part of nature conservation. The battle of modernization and conservation is still huge, especially in metropolitan areas.

2.2 Mixed Frames for Global Warming Campaign in Thai Context

Framing Process in Global Warming Campaign Communication



From this model, it can be seen that framing sources will be those who set certain frames. These frames will be selected by the campaigners to use for their global warming campaigns. They will communicate the frames via their campaign materials and also the mediated news on their campaigns. The public frames will be influenced by the campaigns. Thus, if all three major frames are identified and analysed with certain tool, the effective frames should be revealed and available for the next campaigns.

As the findings demonstrate the three major frames of social frame, financial frame and scientific frame, the discussion is based on each frame found. The social frame leads to the discussion of the roles of global warming experts in society and how this can shape their frames. The expected frames that they should have and the perceived frames they hold are also important in discussing the reliability of framing sources. In the financial frame, the focus is on persuasive motivation especially concrete financial rewards used within the urban area. The environmental campaign is normally seen as remote from and indirectly affecting the audience. Therefore, the economic reward is popular in the campaign message resulting in the financial frame. The scientific frame reported by the target audience members reflects how lay people have come to understand global warming issue. Despite the prediction from this research hypothesis for Thais to use the cultural frame, for this particular problem, they seem to be geared towards scientific knowledge in learning about it.

CHAPTER VII

RESEARCH SUMMARY AND CONCLUSION

Introduction

This chapter summarizes what has been achieved from this research based on the objectives and research questions detailed in the first chapter. There is also a discussion on the research limitations and suggestions for future studies. The final part covers practical recommendations for global warming campaigns in Thailand. From the re-framing process, certain frames are provided to be used in other global warming campaigns.

Addressing Research Objectives and Questions

It is crucial to investigate the frames used in campaigns as well as those held by the target audience to see what type of relationships can be identified. From the research findings, the financial frame or economic frame appeared frequently in both campaigns and target audience minds. The frames, however, reiterate human power over nature and again repeat the fact that financial wealth might solve any problem, even environmental problems. There is a need for further study looking at the framing process to see the social construction of global warming in Thailand and how the Thai context plays an important role in creating the relationship between humans and nature. The concept of globalization and localization of issue (Giddens 2002) can also be used to observe the dynamics of dominant Western discourse and the resistant local discourse of how the locals frame global warming.

This research is an attempt to identify the frames presented in campaign materials and reported by the target audience. However, to ensure that the answers of the participants are the effect of the campaigns rather than news media, other methods can be applied. Focus groups of target audience members can reveal rich descriptions of how they frame global warming and what the main framing sources are. The campaign texts can also be used in the experimental design to see which frames can have more influence or can be easily grasped by Thai audiences.

The BMA can be seen as successful in informing citizens and attracting media coverage in the first phase of global warming campaign projects. After the campaigns have run for three of their four years, Bangkok residents have learnt more about the issue and become more active in terms of their participation in these campaigns. The sheer amount of media coverage, however, is not enough to indicate the success of the campaign but rather indicate the framing of issues and achieving of political objectives (Anderson 2003). The next step for the campaign is that it should go beyond the informing process and place the emphasis on how frames can be constructed and delivered in a way that will really enable change in people's behaviours. Such frames will also be useful for future campaigns.

Objectives	Research Questions	Outputs
a. To identify campaign framing sources	1. What were the private frames on global warming in Thailand?	Social Frame
b. To identify BMA's construction of campaign frames	2. What were the mediated frames portrayed in the BMA campaign on global warming in Thailand?	Financial Frame
c. To identify mediated global warming frames before and after the campaigns	3. What were the global warming frames in the minds of target audience members before and after the campaign	Scientific Frame
d. To compare a., b., and c.	4. What are the relationships among the expert private frames, the campaign frames on global warming and the target audience members' frames in Thailand?	Similarities: problematic issue Differences: definitions, solutions
e. To find out suggestions for global warming frames in campaigns and the media	5. What should be the frames used in global warming campaigns in Thailand?	Mixed Frames of Science and Thai Values

Contribution to Theory Building

Framing Theory in Global Warming Campaigns in the Thai Context

The role of frames in global warming campaigns in Bangkok can reveal the construction of frames individually and socially. The use of the mixed methods approach opens the terrain of framing theory in communication studies.

Moreover, this study has applied the theory in the field of public relations campaigns especially environmental campaign to extend the context of theory. The identification of frames found in this study also offers more alternatives for global warming frames in the Thai context.

Critical Appraisal

Research Limitations

The limitations of research include the bias in the qualitative research part and the distance in the quantitative section. The first issue is a normal problem in most qualitative research. The subjectivity can create bias towards the data analysis. The frames found from the constant comparative method can contain some bias by the researcher especially when one has been working on certain issues for quite some times. The blind spot of data analysis can also become a problem.

Another limitation concerns the quantitative research with the distance between the researcher and respondents. The reported frames from the survey can give some ideas of how people perceive the global warming issue. However, with this method, it cannot yield deep insights into why they think what they think or what they think in detail. The numbers can only help us to see the concrete summary of frames but they cannot provide a rich description of them.

Research Suggestions

A suggestion for future research would be to expand this study in terms of breadth and depth. In terms of breadth, future research could study different provinces or regions to test the frames found. This can enable the categorisation of the target audience members to help create better campaign communication. The breadth can also include an extension of context. Apart from the global warming issue, different issues can also be studied to test these frames, especially the environmental issue.

The depth could be in terms of digging deeper into the meaning of each frame. Different methods can also be used to figure out the more in-depth details to answer more questions. Focus groups or experimental designs can help to reveal the insight of each frame. This can help to create better understanding towards framing construction.

Practical Recommendations

Re-framing Global Warming in Thai Campaigns

From this study, the frames found can be useful for future global warming campaigns especially those launched by the BMA. There is a need to re-frame global warming to be more closely associated with the existing frames. The mix of science and Thai values can be used to communicate with Thai people, particularly those values of Buddhism and the sufficiency economy philosophy.

The study also offers an alternative way for campaign evaluation by combining both qualitative and quantitative methods with the framing theory. This will help to reveal how the target public perceive the issue as well as how the campaigners have presented the issue. Not only will this cover the message design level, but it will also help to predict the short- and long-term effects from the campaigns.

Conclusion

Framing theory provides the opportunity for mixed methods research design to help reveal the frames found from different elements in the global warming campaign communication process. This proves that we can handle global warming from communication studies, particularly by applying the right communicative frames in a certain context.

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APPENDICES

APPENDIX A



คณะนิเทศศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330

มีนาคม 2554

เรื่อง ขอความอนุเคราะห์ให้ข้อมูลประกอบการดำเนินงานวิจัยระดับดุษฎีบัณฑิต

เรียน

เนื่องจากดิฉัน นางธีรดา จงกัรรัตนภรณ์ นิสิตระดับดุษฎีบัณฑิต คณะนิเทศศาสตร์ รหัสประจำตัวนิสิต 5085103428 ได้ดำเนินงานวิจัยเรื่อง “การรณรงค์ภาวะโลกร้อนในกทม. : กรอบความคิดและประสิทธิภาพของ การรณรงค์” ซึ่งเป็นวิทยานิพนธ์ในการศึกษาระดับดุษฎีบัณฑิต โดยได้ทำการศึกษาวิเคราะห์การรณรงค์ภาวะ โลกร้อนของกรุงเทพมหานคร ที่มีการทำอย่างต่อเนื่อง ในช่วง พ.ศ. 2550-2553 โดยใช้ทฤษฎีกรอบความคิด (Framing Theory) ประกอบในการทำความเข้าใจกระบวนการสื่อสารเพื่อ การรณรงค์ภาวะโลกร้อนในบริบท ประเทศไทย

ทั้งนี้คุณค่าที่ได้รับจากการศึกษาวิจัยดังกล่าว คือองค์ความรู้เกี่ยวกับกรอบความคิดประเด็นภาวะโลกร้อนที่ปรากฏในกรุงเทพมหานคร ซึ่งจะนำไปสู่การหากรอบความคิดที่เหมาะสมแก่การสื่อสารประเด็นนี้ในกลุ่มประชาชนชาวไทย เพื่อให้เกิดความเข้าใจ และการปฏิบัติที่สอดคล้องกับนโยบาย อันเป็นส่วนหนึ่งของความพยายามในการสร้างอนาคตที่มีคุณภาพของประชาชนชาวไทย

อนึ่งจากการศึกษาค้นคว้าข้อมูลในเบื้องต้นทำให้ทราบว่าท่านเป็นบุคคลอีกผู้หนึ่งที่เป็นผู้เชี่ยวชาญด้าน ภาวะโลกร้อนในประเทศไทยและมีบทบาทสำคัญในการเป็นแหล่งข้อมูลแก่สังคม ดิฉันจึงใคร่ขอความอนุเคราะห์จากท่านสละเวลาอันมีค่าเพื่อให้สัมภาษณ์ และให้ข้อมูลอันมีคุณค่าต่อการศึกษาวิจัยในครั้งนี้ทั้งนี้รายละเอียด เกี่ยวกับวันเวลาและสถานที่ในการสัมภาษณ์ ดิฉันจะขออนุญาตติดต่อโดยการเข้าพบท่านโดยตรงหรือโดยทางโทรศัพท์ ของข้าพเจ้าหมายเลข 081-567-1920 หรือทางอีเมล ne.teerada@gmail.com อีกครั้งหนึ่ง

ขอขอบพระคุณเป็นอย่างยิ่งต่อการสละเวลาอันมีค่าเพื่อให้ข้อมูลที่ต้องและสมบูรณ์ต่องานวิจัยในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(นางธีรดา จงกัรรัตนภรณ์)

นิสิตระดับดุษฎีบัณฑิต คณะนิเทศศาสตร์

(รศ. ดร. ยุบล เบ็ญจรงค์กิจ)

อาจารย์ที่ปรึกษาวิทยานิพนธ์

แนวคำถามสัมภาษณ์เชิงลึก

กรอบความคิดของผู้เชี่ยวชาญ

- ท่านนึกถึงอะไรเมื่อได้ยินคำว่าโลกร้อน
- ท่านคิดว่าอะไรคือสาเหตุของภาวะโลกร้อน
- ท่านคิดว่าอะไรคือผลกระทบของภาวะโลกร้อน โดยเฉพาะอย่างยิ่งในกทม.
- ท่านคิดว่าอะไรคือการแก้ปัญหาภาวะโลกร้อนโดยเฉพาะในกทม.
- ท่านคิดว่าท่านทำหน้าที่บทบาทอะไรในเรื่องนี้

กรอบความคิดของผู้เชี่ยวชาญท่านอื่น

- ท่านคิดว่าผู้เชี่ยวชาญท่านอื่นมองเรื่องนี้อย่างไรบ้าง
- ท่านเห็นด้วย หรือไม่เห็นด้วยกับกรอบความคิดของผู้เชี่ยวชาญท่านอื่น
- ท่านคิดว่าแต่ละหน่วยงานมีกรอบความคิดเหมือนหรือต่างกันอย่างไรบ้าง
- ถ้าหากมีความแตกต่าง คิดว่าอะไรเป็นปัจจัยทำให้เกิดความแตกต่าง
- ท่านคิดว่าอะไรเป็นปัจจัยที่มีผลต่อกรอบความคิดที่แตกต่างกันในแต่ละหน่วยงาน

กรอบความคิดของสาธารณชน

- ท่านคิดว่าประชาชนทั่วไปคิดอย่างไรกับเรื่องภาวะโลกร้อน
- ท่านคิดว่ามีการนิยามประเด็นนี้อย่างไรบ้าง ในประเด็นของสาเหตุ ผลกระทบ และทางแก้ไข
- ท่านคิดว่าอะไรเป็นสาเหตุที่ทำให้ประชาชนมีกรอบความคิดแบบนี้ เพราะศาสนา หรือปรัชญา
- ท่านคิดว่าประชาชนควรมีกรอบความคิดต่อเรื่องนี้แบบใด

ความคิดเห็นของผู้เชี่ยวชาญต่อการรณรงค์

- ท่านคิดว่าวิธีใดเป็นวิธีที่ดีที่สุดในการสื่อสารเรื่องนี้กับคนไทย
- ท่านคิดว่าประเด็นนี้ควรได้รับการนำเสนออย่างไร หากสิ่งที่น่าสนใจอยู่ในปัจจุบันไม่ได้ผล
- ท่านคิดว่าอะไรเป็นอุปสรรคที่ทำให้การสื่อสารเรื่องภาวะโลกร้อนในกทม. เป็นไปได้ไม่ดีเท่าที่ควร โปรดระบุปัจจัยที่น่าจะเกี่ยวข้อง
- ท่านคิดว่าหน่วยงานกรุงเทพมหานครควรจะปรับทิศทางการรณรงค์ภาวะโลกร้อนอย่างไรให้มีประสิทธิภาพมากกว่าที่เป็นอยู่

APPENDIX B

เขตที่แจก _____ แบบสอบถามเลขที่ _____

แบบสอบถามการรณรงค์ภาวะโลกร้อนในกรุงเทพมหานคร

แบบสอบถามชุดนี้เป็นส่วนหนึ่งของงานวิทยานิพนธ์ระดับดุษฎีบัณฑิตของนิสิตคณะ
นิเทศศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ภายใต้หัวข้อชื่อกรอบความคิดการรณรงค์ภาวะโลกร้อนใน
กรุงเทพมหานคร โดยทางผู้วิจัยขอความร่วมมือจากท่านในฐานะเป็นผู้อยู่อาศัยในกรุงเทพมหานคร
ช่วยตอบแบบสอบถามนี้ และขอขอบคุณเป็นอย่างยิ่งที่ท่านช่วยสละเวลาในครั้งนี้

1) การรับรู้เกี่ยวกับการรณรงค์ภาวะโลกร้อนของกรุงเทพมหานคร

1.1 ท่านเคยได้ยินเกี่ยวกับการรณรงค์ภาวะโลกร้อนของกทม.หรือไม่

- เคย
 ไม่เคย (ยุติการทำแบบสอบถาม)



1.2 มีการรณรงค์ใดบ้างของกทม. ที่เคยรู้จัก หรือจำได้ (กรุณาทำเครื่องหมาย X
หน้าการรณรงค์ที่ท่านจำได้)

ก) เปลี่ยนหลอดไส้ให้หลอดตะเกียบ



ค) ลดขยะ ลดโลกร้อน



ข) ใช้ถุงผ้าแทนถุงพลาสติก



ง) ปิดไฟ 1 ชั่วโมงเพื่อลดโลกร้อน

(60 Earth Hour)



1.3 ท่านคิดว่าการรณรงค์สถานะโลกร้อนที่กรุงเทพมหานครจัดทำขึ้นนั้น.....

	ลักษณะของการรณรงค์	เห็นด้วย อย่างยิ่ง	เห็นด้วย	ไม่แน่ใจ	ไม่เห็น ด้วย	ไม่เห็นด้วย อย่างยิ่ง
1	มีความน่าสนใจ	5	4	3	2	1
2	ให้ข้อมูลเกี่ยวกับภาวะโลกร้อน ที่ชัดเจนมากขึ้น	5	4	3	2	1
3	ส่งเสริมให้อยากเรียนรู้เรื่องภาวะ โลกร้อนมากขึ้น	5	4	3	2	1
4	ช่วยกระตุ้นพฤติกรรมเพื่อลด ภาวะโลกร้อน	5	4	3	2	1
5	ช่วยหาเสียงให้ผู้ว่าการกรุงเทพ มหานคร	5	4	3	2	1
6	ช่วยสร้างภาพลักษณ์ที่ดีให้กับ หน่วยงานกรุงเทพมหานคร	5	4	3	2	1

1.4 ท่านมีความคิดเห็นอย่างไรเกี่ยวกับประสิทธิภาพของการรณรงค์ภาวะโลกร้อนของกรุงเทพมหานคร
ในรอบสามปีที่ผ่านมา (พ.ศ. 2550-2553)

	ประสิทธิภาพของการรณรงค์ของกทม.	ดีมาก	ดี	ปานกลาง	ไม่ ดี	ต้อง ปรับปรุง
1	ช่วยให้คนสนใจประเด็นภาวะโลกร้อน มากขึ้น	5	4	3	2	1
2	ช่วยให้คนมีความรู้เรื่องภาวะโลกร้อน เพิ่มขึ้น	5	4	3	2	1
3	ช่วยให้คนมีส่วนร่วมในการลดภาวะโลกร อนมากขึ้น	5	4	3	2	1
4	ช่วยผลักดันให้ประเด็นภาวะโลกร้อนเป็น วาระแห่งชาติ	5	4	3	2	1
5	ช่วยแก้ปัญหาภาวะโลกร้อน	5	4	3	2	1
6	การรณรงค์ภาวะโลกร้อนของกรุงเทพมหานคร ช่วยเสริมกระแสภาวะโลกร้อนในสื่อ ต่างๆ	5	4	3	2	1

1.5 หลังจากหน่วยงานกรุงเทพมหานครได้ทำการรณรงค์เรื่องภาวะโลกร้อน
เกิดการเปลี่ยนแปลงในด้านต่าง ๆ ต่อไปนี้

	การเปลี่ยนแปลงที่เกิดจากการรณรงค์	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด	ไม่เกิดการเปลี่ยนแปลง
1	ท่านมีความรู้เกี่ยวกับภาวะโลกร้อนเพิ่มขึ้น	5	4	3	2	1	0
2	ท่านมีความคิดว่าประเด็นภาวะโลกร้อนเป็นเรื่องสำคัญ	5	4	3	2	1	0
3	ท่านอยากเรียนรู้เกี่ยวกับภาวะโลกร้อนมากขึ้น	5	4	3	2	1	0
4	ท่านทำกิจกรรมที่ช่วยลดภาวะโลกร้อนมากขึ้น	5	4	3	2	1	0
5	ท่านสนับสนุนการทำงานด้านภาวะโลกร้อนของหน่วยงาน กทม มากยิ่งขึ้น	5	4	3	2	1	0

1.6 ท่านมีข้อเสนอแนะอย่างไรเพื่อให้การรณรงค์ภาวะโลกร้อนของกทม. มีประสิทธิภาพมากยิ่งขึ้น

	ข้อเสนอแนะในการรณรงค์	ควรมากที่สุด	ควนมาก	ปานกลาง	ควนน้อย	ควนน้อยที่สุด
1	ควรเปลี่ยนข้อความหรือสารที่นำเสนอ	5	4	3	2	1
2	ควรเปลี่ยนรูปแบบการนำเสนอข้อมูล	5	4	3	2	1
3	ควรใช้สื่อหลากหลายช่องทางมากขึ้น	5	4	3	2	1
4	ควรเพิ่มกิจกรรมที่น่าสนใจให้ประชาชนมีส่วนร่วมได้ทุกวัน	5	4	3	2	1
5	ควรรำดารา นักแสดง คนมีชื่อเสียงเข้ามามากขึ้น	5	4	3	2	1
6	ควรสร้างความสัมพันธ์ที่ดีกับชุมชนมากขึ้น	5	4	3	2	1

2) การหาข้อมูลเกี่ยวกับภาวะโลกร้อน

2.1 ท่านได้รับข้อมูลเกี่ยวกับภาวะโลกร้อนจากสื่อใดมากที่สุด โปรดระบุ (เลือกได้มากกว่า 1 ข้อ)

_____ โทรทัศน์ เช่น ช่อง 3, 5, 7, 9, 11 และ TBPS

_____ เคเบิล/ ดาวเทียม เช่น True Vision

_____ วิทยุ

_____ หนังสือพิมพ์

_____ นิตยสาร

_____ เว็บไซต์ต่างๆ เช่น sanook, kapook

- _____ เว็บไซต์สืบค้นข้อมูล เช่น google, yahoo
- _____ เครือข่ายสังคมออนไลน์ เช่น twitter, facebook
- _____ กระดานสนทนา (Webboard)
- _____ บุคคลในครอบครัวและญาติ
- _____ เพื่อนและเพื่อนร่วมงาน
- _____ งานกิจกรรมรณรงค์ต่าง ๆ เช่น การจัดคอนเสิร์ต การจัดแถลงข่าว เป็นต้น

3) กรอบความคิดเกี่ยวกับภาวะโลกร้อน

3.1 เมื่อพูดถึงคำว่าภาวะโลกร้อน ท่านนึกถึงคำ หรือภาพใดบ้าง โปรดให้รายละเอียด

คำ: _____

ภาพ: _____

3.2 โปรดอ่านข้อความต่อไปนี้ แล้วระบุความคิดเห็นที่มีก่อนการรณรงค์ และหลังจากเกิดการรณรงค์

กรอบความคิด ประเด็นภาวะ โลกร้อน	ก่อนมีการรณรงค์ของกทม.					หลังมีการรณรงค์ของกทม.				
	เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง	เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
กรอบเชิงวิทยาศาสตร์	5	4	3	2	1	5	4	3	2	1
1 นำแข็งละลายที่ขั้ว โลกเพราะอุณหภูมิ ที่ร้อนและเพิ่มขึ้น	5	4	3	2	1	5	4	3	2	1
2 ชั้นบรรยากาศที่ลด ลงเพราะการปล่อย ก๊าซเรือนกระจก	5	4	3	2	1	5	4	3	2	1
3 ภูมิอากาศที่เปลี่ยน แปลงผันผวนอย่าง มากในเขตพื้นที่ ต่างๆ ทั่วโลก	5	4	3	2	1	5	4	3	2	1
4 การขาดองค์ความรู้ ทางวิทยาศาสตร์ และแนวทางใน การจัดการปัญหา ภาวะโลกร้อน	5	4	3	2	1	5	4	3	2	1
5 ปัญหาภาวะโลก ร้อนต้องการองค์ ความรู้ และ	5	4	3	2	1	5	4	3	2	1

กรอบความคิด ประเด็นภาวะ โลกร้อน		ก่อนมีการรณรงค์ของกทม.					หลังมีการรณรงค์ของกทม.				
		เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง	เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
	เทคโนโลยีใหม่ๆ เพื่อสร้างความเข้าใจ และแก้ไขปัญหา										
กรอบเชิงการเมืองและ เศรษฐกิจ											
6	ภาวะโลกร้อนไม่ใช่ปัญหาของประเทศที่ร่ำรวยและ พัฒนาแล้ว แต่เป็นปัญหาของ ประเทศไทยเช่นกัน	5	4	3	2	1	5	4	3	2	1
7	การแก้ปัญหาภาวะ โลกร้อนไม่ใช่ภาระ ของประเทศอุตสาหกรรมที่ปล่อยก๊าซ เรือนกระจกมาก เพียงผู้เดียว	5	4	3	2	1	5	4	3	2	1
8	สาเหตุของภาวะ โลกร้อนคือ การพัฒนาวัตถุและ เทคโนโลยีต่างๆ โดยเฉพาะอย่างยิ่ง เชิงอุตสาหกรรม	5	4	3	2	1	5	4	3	2	1
9	ภาวะโลกร้อน เกิดจากการเจริญ เติบโตของสังคม เมือง	5	4	3	2	1	5	4	3	2	1
10	ความร่วมมือจาก นานาชาติเป็นสิ่ง สำคัญในการจัดการ ปัญหาภาวะ โลกร้อน	5	4	3	2	1	5	4	3	2	1
กรอบเชิงสังคมและ วัฒนธรรม											
11	ภาวะโลกร้อนเป็น การเปลี่ยนแปลง ของธรรมชาติตาม	5	4	3	2	1	5	4	3	2	1

กรอบความคิด ประเด็นภาวะ โลกกร่อน		ก่อนมีการรณรงค์ของกทม.					หลังมีการรณรงค์ของกทม.				
		เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง	เห็นด้วย อย่างยิ่ง	เห็น ด้วย	เฉยๆ	ไม่เห็นด้วย	ไม่เห็นด้วย อย่างยิ่ง
	ปกติ										
12	ภาวะโลกร้อนเป็น จุดแตกหักระหว่าง ธรรมชาติและ มนุษย์	5	4	3	2	1	5	4	3	2	1
13	ภาวะโลกร้อนคือ บททดสอบความ สามารถ ของมนุษย์ว่าจะจัด การกับธรรมชาติ ได้อย่างไร	5	4	3	2	1	5	4	3	2	1
14	ภาวะโลกร้อน สะท้อนกฎแห่ง กรรมที่มนุษย์ได้ก่อ เอาไว้	5	4	3	2	1	5	4	3	2	1
15	ภาวะโลกร้อนนำมา ซึ่งภัยพิบัติและ ความหายนะ รวมไปถึงวัน สิ้นโลก	5	4	3	2	1	5	4	3	2	1
16	การใช้ชีวิตประจำ วันของมนุษย์ทุก คนก่อให้เกิด ภาวะโลกร้อน	5	4	3	2	1	5	4	3	2	1

3.3 เมื่อพูดถึงผลกระทบจากภาวะโลกร้อน ท่านเป็นกังวลสิ่งใดต่อไปนี้มากที่สุด
โปรดเรียงลำดับจากมากไปน้อย

(กังวลมากที่สุดคือ 1 กังวลน้อยที่สุดคือ 6)

_____ ตัวท่านและครอบครัว

_____ ชุมชนของท่าน

_____ เมืองกรุงเทพฯ

_____ ประเทศไทย

_____ คนทั่วโลก

_____ ธรรมชาติ

3.4 ท่านคิดว่าภาคส่วนใดควรรับผิดชอบดูแลเรื่องภาวะโลกร้อนมากที่สุด 3 อันดับแรก

(หน่วยงานที่ควรรับผิดชอบมากที่สุดคือ 1 รองลงมาคือ 2 และอันดับ 3 คือ 3)

_____ องค์กรระหว่างประเทศ เช่น สหประชาชาติ (UN)

- _____ ประเทศมหาอำนาจ เช่น สหรัฐอเมริกา สาธารณรัฐประชาชนจีน
- _____ หน่วยงานอิสระด้านสิ่งแวดล้อม เช่น Greenpeace WWF
- _____ หน่วยงานรัฐบาลและคณะรัฐบาล เช่น นายกรัฐมนตรี คณะรัฐมนตรี และ
ข้าราชการประจำ
- _____ สื่อมวลชน เช่น สถานีโทรทัศน์ สถานีวิทยุ และสำนักพิมพ์ต่าง ๆ
- _____ องค์กรภาคธุรกิจ เช่น บริษัท ห้างร้านต่าง ๆ
- _____ องค์กรบริหารส่วนท้องถิ่น เช่น กรุงเทพมหานคร
- _____ ประชาชนชาวไทยทุกคน

4) พฤติกรรมที่ช่วยลดภาวะโลกร้อน

4.1 ท่านเปลี่ยนแปลงพฤติกรรมหลังจากมีการรณรงค์ภาวะโลกร้อนของหน่วยงาน กทม. หรือไม่

- เปลี่ยน
- ไม่เปลี่ยน (ข้ามไปทำข้อ 5 ข้อมูลส่วนบุคคล)

4.2 ท่านเปลี่ยนแปลงพฤติกรรมในด้านใดบ้าง โปรดเลือกสิ่งที่ท่านทำจากกิจกรรมดังต่อไปนี้

4.2.1 การเดินทาง (เลือกได้มากกว่า 1 ข้อ)

- _____ การใช้รถร่วมกัน หรือ คาร์พูล
- _____ การตรวจสอบลมยางเป็นประจำ
- _____ การขับรถด้วยความเร็วคงที่
- _____ การใช้ระบบขนส่งมวลชน
- _____ การเลี่ยงการเดินทางที่ไม่จำเป็น
- _____ หันมาใช้พลังงานทดแทน
- _____ ดับเครื่องยนต์เมื่อจอดรถนาน

4.2.2 สถานที่ทำงาน (เลือกได้มากกว่า 1 ข้อ)

- _____ ปิดคอมพิวเตอร์เมื่อไม่ใช้
- _____ ไม่ทิ้งเครื่องไฟฟ้าทิ้งไว้ในโหมดสแตนด์บาย
- _____ ตั้งอุณหภูมิเครื่องปรับอากาศที่ 25 องศา
- _____ ใช้กระดาษทั้งสองหน้าเสมอ และรีไซเคิลกระดาษ
- _____ ใช้ถ้วยที่นำกลับมาล้างได้
- _____ ใช้คอมพิวเตอร์ส่งเอกสารมากกว่าพิมพ์ใส่กระดาษ

4.2.3 บ้านที่อยู่อาศัย (เลือกได้มากกว่า 1 ข้อ)

- _____ ปรับเครื่องปรับอากาศตามสภาพอากาศ
- _____ ดื่มโปรสตุ้เย็นเมื่อไม่ใช้
- _____ เปลี่ยนหลอดประหยัด
- _____ ซ่อมของน้อยลง และวางแผนการจ่ายตลาด

- _____ ปลุกต้นไม้เพิ่มขึ้น
 _____ ใช้อุปกรณ์แทนพลาสติก
 _____ กินผลไม้ตามฤดูกาล
 _____ ซักผ้าในปริมาณพอเหมาะ
 _____ ไม่ใช้เครื่องทำน้ำอุ่น

5) ข้อมูลส่วนบุคคลของผู้ตอบแบบสอบถาม

5.1 เขตที่อยู่อาศัย

- | | |
|---|--|
| <input type="checkbox"/> 1. กลุ่มรัตนโกสินทร์ (ดุสิต พระนคร
ป้อมปราบศัตรูพ่าย สัมพันธวงศ์) | <input type="checkbox"/> 7. กลุ่มพระนครเหนือ (บางเขน หลักสี่
ดอนเมือง สายไหม ลาดพร้าว) |
| <input type="checkbox"/> 2. กลุ่มลุมพินี (ปทุมวัน บางรัก สาทร
วัฒนา) | <input type="checkbox"/> 8. กลุ่มบูรพา (บางกะปิ คันนายาว
วังทองหลาง บึงกุ่ม สะพานสูง สวนหลวง) |
| <input type="checkbox"/> 3. กลุ่มวิภาวดี (จตุจักร บางซื่อ พญาไท
ดินแดง ห้วยขวาง ราชเทวี) | <input type="checkbox"/> 9. กลุ่มสุวินทวงศ์ (คลองสามวา หนองจอก) |
| <input type="checkbox"/> 4. กลุ่มเจ้าพระยา (คลองเตย บางคอแหลม
ยานนาวา พระโขนง บางนา) | <input type="checkbox"/> 10. กลุ่มศรีนครินทร์ (ลาดกระบัง มีนบุรี
ประเวศ) |
| <input type="checkbox"/> 5. กลุ่มธนบุรี (ธนบุรี บางกอกใหญ่
คลองสาน บางกอกน้อย บางพลัด) | <input type="checkbox"/> 11. กลุ่มมหาสวัสดิ์ (ทวีวัฒนา ตลิ่งชัน
บางแค หนองแขม) |
| <input type="checkbox"/> 6. กลุ่มตากสิน (ภาษีเจริญ จอมทอง
ราษฎร์บูรณะ) | <input type="checkbox"/> 12. กลุ่มสนามชัย (บางขุนเทียน บางบอน
ทุ่งครุ) |

5.1 อายุ

- ต่ำกว่า 18 ปี
 18-25 ปี
 26-33 ปี
 34-41 ปี
 42-49 ปี
 50-60 ปี

5.2 เพศ

- ชาย
 หญิง

5.3 ระดับการศึกษาสูงสุด (รวมทั้งที่กำลังศึกษาอยู่)

- ประถม หรือ มัธยมปลาย
- อาชีวศึกษา หรือ ปวช.
- อนุปริญญา หรือ ปวส.
- ปริญญาตรี
- ปริญญาโท หรือ ปริญญาเอก

5.4 อาชีพ

- ว่างาน / แม่บ้าน / เกษียณอายุ
- นักเรียน / นักศึกษา
- รัฐบาล / เจ้าหน้าที่ของรัฐ
- เจ้าหน้าที่รัฐวิสาหกิจ
- พนักงานบริษัท / องค์กรเอกชน
- ค้าขาย / ธุรกิจส่วนตัว
- ประกอบอาชีพอื่นๆ (โปรดระบุ)

5.5 รายได้ต่อเดือน

- ต่ำกว่า หรือเท่ากับ 5,000 บาท
- 5,001 – 10,000 บาท
- 10,001-20,000 บาท
- 20,001-30,000 บาท
- 30,001-40,000 บาท
- 40,000 บาทขึ้นไป

5.6 สถานภาพการสมรส

- โสด
 - สมรส / อยู่ด้วยกัน
 - ม่าย / หย่าร้าง /
- แยกกันอยู่
- มีบุตร _____ คน ไม่มีบุตร

----- 😊 จบแบบสอบถาม ขอขอบคุณค่ะ 😊 -----

BIOGRAPHY

Mrs. Teerada Chongkolrattanaporn was born on 7 January 1981 in Bangkok, Thailand. She graduated her bachelor degree from Faculty of Arts, Chulalongkorn University with English major in 2001. She continued her master degree in Speech and Communication Studies at San Francisco State University, CA, United States of America and graduated in 2005. In the same year, she came back to Thailand to start her career as a lecturer at Faculty of Communication Arts, Assumption University. In 2007, she decided to enrol in PhD program of Faculty of Communication Arts, Chulalongkorn University and finished 32 credits within the first three semesters. After passing the qualifying examination in 2008, she joined co-tutelle program with Macquarie University, Sydney, Australia. She spent 14 months in Sydney, Australia to pursue her research for this dissertation.

During her candidature, she published three journal articles; two are in Thai national journals and another is in international climate change journal. She has received three grants to achieve her research: 1) 100th year Chulalongkorn University Grant from Academic Affairs, 2) D-RSAB from Graduate School and 3) Human Resource Development from Faculty of Communication Arts. All are sponsored by Chulalongkorn University. She has been working as a full-time lecturer in Department of Public Relations, Faculty of Communication Arts, Chulalongkorn University since 2009.