

***Issues and Information Management for Public Communication about the Willingness to Pay for the Forest Areas of the Bangkok Dwellers Project***

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**Abstract**

The research on public information management concerning the “Issues and Information Management for Public Communication about the Willingness to Pay for the Forest Areas of the Bangkok Dwellers Project” was designed to raise public awareness. The purpose of this research is 1) to distribute information regarding urban forests to the public through information management; 2) to study communication patterns to broaden the target group’s understanding of urban forest issues; and 3) to evaluate the results of communications that relate to urban forest issues. The methodology of this research comprises documentary analysis, in-depth interview, observation, and focus group discussion. The study involves creating a Facebook fan page named “URBAN FOREST” as a public space for the communication and exchange of knowledge about urban forest issues. The results demonstrated that information and knowledge about urban forest issues are driven by social media and mass media. Under the concept of media advocacy and setting agenda, information dissemination occurred through five activities with different communication patterns. The results showed that the participants were satisfied with all activities. To conclude, the overall success of communicating “urban forest” issues to the wider public includes the integration of social media, a Facebook fan page “URBAN FOREST”, as well as information distribution through mass media and media activities.

Keywords: Issues and information management, Public communication, Urban Forest

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## Introduction

Climate change is a threat of the 21st century. Global warming is not only affecting the ecosystem but also the economic development and growth of the country. It has already caused social problems such as benefit negotiation and conflict in resource allocation both at the local and national levels. Thus, there is a need for public communication to create understanding in every sector of society that will bring about mutual acceptance and responsibility in dealing with such problems.

Although there seems to be a general awareness of climate change threats in Thai society, a spirit of cooperation among citizens in coping with possible threats still needs to be encouraged. Both public and private organizations have integrated the environment dimension into their own contexts, especially corporate social responsibility and sustainable development. However, in the area of public communication, issues have been raised about how to communicate environmental concerns to the target audience in different contexts and cultures. Several research findings (e.g., Chongkolrattanaporn, 2011; Zia & Todd, 2010) show that communicating global warming issues more effectively requires the use of information that enables people to relate global warming impact to their daily living. Generally, people are less likely to link their behaviors to global warming and tend to think that global warming is other people's problems. This results in their low levels of awareness and participation. Therefore, communication has to take the audience's socio-cultural context into account.

Global warming research is one of the interest areas of the Thailand Research Fund. Despite a large body of knowledge in this area, there is still a communication problem of how to promote an understanding and use of research information to the public at large. The effective communication approach must consider the background knowledge of the target audience. Such an approach can capture the audience's attention and suits their contexts and lifestyles. *Willingness to Pay for Forest Areas of Bangkok Dwellers*, a research project conducted by the Faculty of Economics, Thammasat University is a significant work which highlights the issue of urban forests. Based on the knowledge in environmental economics, this research communicates the meaning of *urban forests* by using the following conceptual frameworks: 1) The management of urban forests which includes an ecosystem, a wooded area developed around human settlements in an urban setting with management system that generates economic values and creates a caring and sustainable society; 2) The urban way of life in forest areas which requires care and management of trees and plants to conserve forests as well as to provide benefits for dwellers; 3) The care and management of urban forests which is enhanced through the roles of public and private organizations and educational institutions.

In this project, issues on urban forests are communicated at the right time when city expansion aims mainly at developing economic growth. The government's policy in developing the Special Economic Zones (SEZ) has rapidly caused widespread of land clearing for large scale building construction, such as apartment buildings, condominiums, housing complexes, and shopping malls, which in turn has increasingly caused air pollution and rising temperature. On the other hand, there is no clear policy for urban forest management. Isra News Agency (2016) reported that General Prayuth Chan-ocha, the Prime Minister, during his talk over radio, ordered

government authorities including the Ministry of Interior and the Ministry of Transport to lay down appropriate measures to ensure that big trees are protected during road and pavement construction and to arrange for arborists to keep the trees in good condition. However, such a talk is seen as an empty rhetoric which may help appease stakeholders in a particular situation.

Efforts to preserve and increase the green area of the city are mostly initiated by some private and/or non-profit organizations and social advocacy groups. For example, in 2012 the PTT Reforestation Institute began to develop the *Metro-Forest Project* on the eastern fringes of Bangkok. Approximately 2 hectares of abandoned land was designed to create an ecological forest and recreation area. The project aimed to raise an environmental awareness and educate the public about local forest ecology. Within the Thailand Green World Foundation, a group of young professionals who are tree lovers initiated the *Big Trees Project* in 2010. The project has been organizing campaigns via a Facebook Fan Page BIG Trees to protect big trees from being cut down and save green spaces in Bangkok and other provinces. Despite such efforts, the overall urban environment situation reflects a general lack of knowledge in urban forest management in the public, private and social sectors.

In the present research, communication of urban forest issues is deemed essential and needs to keep up with social trends. This requires systematic public communication that creates accurate understanding about the issues in the same direction. The researchers must disseminate their research findings through appropriate channels to reach the target audience. A variety of channels include different collaborative and professional networks, social advocacy groups, personal media (e.g., academics, scholars and social activists), and activities that promote issues, concepts, and contents through mass media. It is crucial to explore new ways of communication that are being used by the target group such as social media, for instance, *Facebook Fan Page "Urban Forest"* is designed to suit media exposure among urban dwellers to increase their understanding of urban forest issues.

## **Objectives**

The three main objectives of this research are:

1. To distribute information regarding the *Willingness to Pay for Forest Areas of the Bangkok Dwellers Project* to the public through information management;
2. To study communication patterns that can create understanding of urban forest issues among the target group;
3. To evaluate the effectiveness of the communication patterns used in the project.

## **Target Audience**

1. Primary target audience

The mass media plays a very important role as a driving force of the project by communicating information about urban forests to the public through the main stream media, such as broadcast media, print and online newspapers, and online news agencies. Therefore, the mass media, as gatekeeper and agenda setter, must have accurate knowledge and understanding of urban forest issues, and participate in the

project by presenting urban forest information in news reports, special reports, news scoops, and interviews.

## 2. Secondary target audience

The urban dwellers in Bangkok as well as other cities in Thailand are aware of the issues and understand the meaning and importance of urban forests from their exposure to mass media and social media, particularly *Facebook Fan Page Urban Forest* in which information is presented in several formats, e.g., storytelling, video clips, infographic presentation, and short films.

## **Operational Definitions**

*Issues and information management for public communication* refer to methods and procedures information management of urban forest issues for public communication. A working group serves as messenger who sends message to the target audience which includes mass media and urban dwellers by using various media, such as mass media, personal media, networking media, activities, and social media, to make urban dwellers aware of urban forest issues.

*Urban Forest Project* aims to educate the public about benefits of urban forests and to create awareness of its importance which will lead to a collaborative management of urban forests for a good ecosystem. The project is conducted under the research project *Issues and Information Management for Public Communication about the Willingness to Pay for the Forest Areas of the Bangkok Dwellers*.

*Facebook Fan Page URBAN FOREST* refers to a social media space, Facebook, which is a driving force in sending messages about urban forests to people in the urban society to make them understand and aware of urban forest issues. Facebook is also used to build an online community for members to interact with each other by sharing news, information and ideas about the city, its dwellers and forests, or expressing public opinions.

*Communication driven by media advocacy* is a mass media and social media strategy used for public communication to create an understanding of urban forest issues. The understanding will develop social awareness and solidarity that empower individuals and groups to push for an effective policy in urban forest management for a good ecosystem.

*Communication process* means the approaches developed by this project to achieve the objectives by communicating information to the public through activities and social media strategy in the form of storytelling video clips.

*Communication process* comprises the following 7 steps: 1) raising awareness, 2) adapting to changing situations, 3) engaging the target audience on *Facebook Fan Page Urban Forest*, 4) pushing forward urban forest issues; 5) joining forces with alliance networks, 6) engaging the target audience through activities, and 7) publicizing on Facebook.

*Network* refers to individuals, groups or organizations which collaborate with the Urban Forest Project. The collaboration involves communicating, sharing knowledge

and information, enhancing relationship, and conducting activities. The existing network includes the Big Trees Project, BKK Museum, the Seub Nakhasathien Foundation, Huay Kwang Community, the Thai Society of Environmental Journalists, and A Day Magazine. An additional network includes the Bangkok Metropolitan Administration, the Ministry of Natural Resources and Environment, and Chulalongkorn University.

## **Methodology**

This research is an action research. In collecting data, the researchers used the following methods:

- *Documentary analysis* involved analytical reading and reviewing documents and websites on urban forest topic.
- *In-depth interviews* were conducted with researchers in the field of urban environment.
- *Observations* and *focus group discussions* were conducted with mass media and civil society organizations that were engaged in environmental activities.
- *Social media analysis*, a type of online research methods was carried out by creating a *Facebook Fan Page Urban Forest* as a communication space on urban forest issues. Contents communicated among members were reviewed and analyzed.
- *Media advocacy* (Jernigan & Wright, 1996) was the strategic use of mass media and social media to support the project's efforts to communicate three main issues to the target audience: 1) Research-based definitions of urban forests, and concepts of urban forest management; 2) Urban way of life in forest areas; 3) Care and management of urban forests.
- *Communication through collaborative networks* included the alliance of civil society organizations involved in environmental issues.

## **Conclusion and Discussion**

From research results, issues and information management of urban forests, using mass media and social media as a driving force and employing such strategies as media advocacy and agenda setting and framing through communication patterns in five activities can be summarized and discussed in the following dimensions:

### ***Setting news agenda "Urban Forest"***

The urban forest research team reviewed urban forest issues with Associate Professor, Dr. Niramorn Suthammakit and Assistant Professor, Dr. Pracha Koonnathamdee, the authors of the *Willingness to Pay for the Forest Areas of the Bangkok Dwellers Project*. Communication issues were summarized as follows:

- An urban forest is the management of green spaces or a collection of trees in the city, and the values given to trees as part of urban development.
- Benefits of an urban forest include 1) 2-8 Degrees Celsius temperature reduction, 2) Air pollution filter, and water flow control which improves the quality of water, 3) One tree absorbs 12 kilograms of carbon dioxide per year,

- 4) Spending time among trees lowers blood pressure and reduces stress, and 5) A forest area raises property values up to 20%.

The research team and the authors agreed to use three terms in pushing the issues forward: 1) urban forest, 2) forest in cities, and 3) more than trees. The three terms were used as the theme of the project, *Urban forest, forest in cities, and more than trees*, which signified a living place filled with trees, a human settlement and an ecosystem (e.g., good climate, shady areas, appropriate temperatures, and stress reduction).

After discussions with the authors, the research team set “urban forest” as news agenda, planned communication strategies, and identified mass media as the main target audience that would communicate the urban forest issues to the public through the mainstream media.

### ***Mass Media and Social Media as a Driving Force***

In the age of advanced technology, the media landscape is drastically changing because technology increases the speed of communication. The traditional mainstream media such as television, radio and newspaper, which once had huge influence on public opinion, is becoming obsolete in the face of new media. The emergence of digital media, especially the social media sites like Facebook has transformed the way people communicate.

According to the current statistics (January 2016-May 2017), it is reported that 47 million of Thais are Facebook users, 11 million are Instagram users, and 41 million are Line users (Coconuts Bangkok, 2017). It further explains that 47% of Facebook users are equivalent 70% of Thailand’s population, and that among the 47 million users, 27 million reside in Bangkok. The statistics confirms the project’s appropriate choice of urban dwellers as a target audience, and the use of social media site, Facebook. *Facebook Fan Page Urban Forest* is designed to be a communication platform that both collects research information and disseminate information to the public. Research (Kenski & Stroud, 2006; Hargittai, 2007) has shown that creating a Facebook group enables rapid information flow and provides a space for interaction and participation; thus, members get updated information on specific issues of interests.

Wang and Ji (2005) mention that effective environmental information management requires organizing public forums. However, the design of such forums needs to be connected with the concept of knowledge society and information system by drawing the important issues to the attention of receivers in both physical and online worlds. As seen from the public communication process of urban forest issues, communication patterns in the form of activities had been carried out twice, targeting the mass media. The first activity was to organize a forum with news editors specialized in social and environment news. The second was to arrange a trip for a group of mass media people to study the management of forests in Nan Province. These two activities employed media advocacy strategy which comprised setting the agenda, identifying issues for discussion, and pushing forward the urban forest policy. The other process involved groups and organizations in the network in conducting

three activities. The first activity was to organize a forum on *Follow in the King's Footsteps and Create Urban Forests*. The second was to organize a forum on *Urban Forests and Sustainability towards Thailand 4.0*. The third was to organize a photo exhibition on *Forests, People, and Cities*. These activities employed agenda setting and framing strategy to bring urban forest issues to the attention of mass media and subsequently to urban dwellers.

### ***Mass Media as a Target Audience***

Mass media plays a role in the process of the social construction of reality and shaping public perceptions. Therefore, the activities for public communication in the initial stage of the project were designed to target the mass media. As mentioned earlier, the first two activities were organized to create public awareness and understanding through the mainstream media which served as a change agent. The mass media was expected to get the issues on the public agenda in the forms of news, articles special reports, TV scoop interviews with researchers who were experts of urban forests.

These two activities resulted in the dissemination of urban forest issues on television, radio, newspapers, and online media. Examples included Thai PBS Nightly News, Channel 3 TV, Nation Channel, TNN TV, and New TV; Radio 90.5 FM, Mcot Radio Network, and Radio 101 FM; online news agencies such as Isra News, Green News, and the Matter. The current estimated cost for such publicity, if paid, could reach over one million baht.

### ***Agenda Setting: Framing for Access***

The process of media advocacy is connected to the concept of agenda setting and newsworthiness. Successful media advocacy works through the mass media to put the spotlight on the issues so that the media can further stimulate the audience interests and mobilize public support. The forum on *Follow in the King's Footsteps and Create Urban Forests* was the first public event organized after King Bhumibol Adulyadej Rama 9 had passed away. This activity was designed to highlight the King's effort in forest management by inviting Dr. Wiwat Salayakamtorn, the President of the Institute of Sufficiency Economy and the President of the Agri-Nature Foundation to be the keynote speaker. To involve such a famous social leader in the public awareness raising activity was a step based on a communication principle of choosing a sender who has social credibility that can influence public perceptions. Along the same line, in organizing the activity, *Urban Forests and Sustainability towards Thailand 4.0*, the project team aimed to make a link between the project's activity and the national agenda, *Thailand 4.0* developed by the government as the key strategy for development. This was intended to attract the media attention which would stimulate debates and discussions to make the urban forest issues newsworthy.

### ***Personal Media in Communicating Urban Forest Issues***

To include research information about urban forest issues in agenda setting, it requires communication through personal media. Thus, the project team organized interview sessions in which the news media interviewed two researchers from the Thailand

Research Fund, Associate Professor Dr. Niramom Sutummakit and Assistant Professor Dr. Pracha Koonathamdee, who conducted the research on *Willingness to Pay for Forest Areas of Bangkok Dwellers*. The research, conducted in the field of economic environment, presents details and complexity of social problems, urban way of life, and the growth of the city in various dimensions. With such research experience and professional expertise, both researchers could offer accurate and reliable information about urban forest issues, handle complicated media questions, and clarify some issues of public interest such as tax management system, and management of big trees in the city.

The use of personal media also included groups of famous people who had gained public acceptance, such as leaders of environmental alliance organizations, the Editor of A Day Magazine, the Owner of BKK Museum, the Secretary-general of the Seub Nakhasathien Foundation, the Big Trees Project Director, Huay Kwang Community Leader. They were all engaged in environmental work. Each group acted as message sender who delivered contents on urban forest issues to various sub-groups.

The project team appreciated the strategic value of personal media as message senders because they provided accuracy, validity and reliability to the message, such as definition, meaning, and significance of urban forests in different contexts. Senders could be individuals, groups, working groups, agencies, organizations or institutions, but they need to have credibility in the public eye. As Pilanthaowat (2011, p. 123) points out, the main characteristics of a sender include competence and expertise, creditability, being a role model, and commitment to receivers.

Participants of the activity, *Urban Forests and Sustainability towards Thailand 4.0*, included representatives from public organizations, e.g., the Permanent Secretary of the Ministry of Natural Resources and Environment, the Director General of the Department of Environmental Quality Promotion, and the Director of the Environment Department, Bangkok Metropolitan Administration. There were also administrators from private organizations and educational institutions such as PTT Public Company Limited and Chulalongkorn University. These participants acted as senders to deliver messages about urban forests to the target audience. In addition, there were other personal media from different occupations who gave interviews on the issues so that the project team could produce video clips to be shown online through *Facebook Fan Page Urban Forest*. Based on the advantages of the interview method (Puntavanun, 2001 as cited in Sriboonlue, 2006, pp. 20-21), the interviews provided understanding about urban forest issues through the exchange of knowledge and experiences and the question answer session.

### ***Message Strategy***

The message design in this project is to use research that presents rational and reliable information and deliver it through researchers who are the owner of research works, academic communicators of the project, and social activists who are the project's alliance and play an active role in urban forest issues. Thus, in organizing activities for the target audience, framing was prepared for senders in each activity to deliver the message as intended and increase the opportunity for public attention to the issues. The contents could be modified within the definition of urban forests to reflect the tangibility of work and the roles of each participating organization.



The message strategy in organizing forums provided the opportunity for senders to share experiences with each other, and presented useful information from the point of view of experienced speakers from all participating organizations. A trip to study an urban forest concept model in Nan Province, and the video clips presenting interviews with individuals who pioneer concepts of urban forest management promoted learning and sharing of information among urban dwellers. The mass media broadcasts and communication on social media with online sharing of contents enabled and enhanced interaction on urban forest issues.

### ***Media Strategy***

What has been mentioned above shows that traditional mass media does not have much power in shaping the public perceptions as it did in the past. Thus, the media strategy used in this project was a combination of mass media and social media. To take an advantage of the social media, the *Facebook Fan Page Urban Forest* was designed to provide an online space to build a community of knowledge in which dissemination of research information, such as video clips and infographic presentation, took place. On this Facebook Fan page, various forms of communication occurred, e.g., news-sharing from mass media and participating organizations, communicating information about urban forest issues, and publicizing related events and activities. The application of Facebook Live as a live-streaming tool could broadcast live the public forums. As a social networking site, Facebook also offered the opportunity to the media consumer, who was interested in urban forest issues, to search for, ask about, and exchange needed information and share experiences related to the issues. Facebook, therefore, serves as a channel of information distribution for urban dwellers in the digital age.

As a subset of new media, social media, without being confined by time and space, can respond to the needs of information seekers more effectively than old media. New media refers to a communication system which is connected to global electronic networks (Kawamoto, 1997). The application of the *Facebook Fan Page Urban Forest* as a communication space to create a community on a social network helped heighten awareness on urban forest issues of individuals in urban society. It also facilitated networking of social groups with shared interest in environment, for instance, BKK Museum, the Big Trees group, the Sueb Nakhasathien Foundation, the Facebook Fan Page NithesNIDA, and the Facebook Fan Page APDA. The Facebook Fan Page APDA was a community of amateur photographers that ran an online campaign to raise awareness of the issues and gained participation from members in sending their photographs for the exhibition on *Forests, People, and Cities*. It is evident that such a communication approach aims to encourage collaboration, mutual support, and information exchange for shared learning goals. The point is well supported by Kaewthep and Chaikoonpol (2012) who explains that the characteristics of online social networks include media convergence that facilitates real-time interactions, and one-to-many communication that disseminates information to different groups of people with shared interests, enabling instant access to and communication of information. The Urban Forest project, the Metro-Forest Project, and Urban Forest Thai are examples of social media groups who have a shared interest in increasing and managing the green area of the city.

The strategy of integrating mass media contents into public activities and the *Facebook Fan Page Urban Forest* has proved that the combination of traditional mainstream media and social media has the power in bringing the issues to widespread public attention. This corresponds with the media advocacy model used by the project team to involve the mainstream mass media in the public forum and the study trip in Nan Province. The mainstream mass media, e.g., the Nation Newspaper, Thai PBS, Posttoday Newspaper, Bangkok Business News, Isra News Agency, ThaiPublica Online News, Thai News Agency MCOT, Thairath TV, TNN Channel, etc. had continuously publicized the project's news and activities. Organizing two public forums, *Follow in the King's Footsteps and Create Urban Forests* and *Urban Forests and Sustainability towards Thailand 4.0*, and a photo exhibition on *Forests, People, and Cities* fostered the continuation of information flow through diverse use of personal media.

News presentation on every possible communication platform enabled public engagement and participation, i.e. exchange, sharing and disseminating of information via news reports, video clips, radio programs, infographic designs, Facebook Fan Page, network organizations' websites and magazines. Thus, the Urban Forest Project had achieved its objective in raising public awareness and gaining public support and participation.

#### ***Alliance Network of Environment Organizations and Pushing Forward Urban Forest Issues***

A network, as defined by Chareonwongsak (2000), refers to an extended group of individuals, organizations or institutions in which members have a connection with each other and work together as a system with shared objectives or an agreement, or collaborate to perform activities. Using this definition, the project team conducted a communication network analysis in several group meetings to review communication issues of the project and to identify individuals, groups, organizations, and institutions who were interested in the Urban Forest project. This analysis is based on the concept of communication network analysis described by Sthapitanonda and Thirapan (2003). According to Sthapitanonda, before conducting any project, the project team needs to understand the overall perspective of communication and networks, to find individuals and groups that will be part of network, and to identify the communication role of each network member. The analysis of communication issues determines the potential of the network in communication, which will lead to understanding of the overall perspective of the network. From such analysis, the project was able to identify groups and organizations that formed the alliance network, such as BKK Museum, the Seub Nakhasathien Foundation, the Big Trees Project, Huay Kwang Community, and the Society of Environmental Journalists.

Chareonwongsak (2000) also points out that an important factor of any network is a cooperation of groups or organizations with a common interest; for instance, a group with shared interest in environment of an urban city can form a connection between groups and among individuals who share a common perception, mutual benefit and interest. Therefore, alliance network organizations whose representatives served as speakers in the Urban Forest forums had complementary relationships. They were willing to do what was in the best interest to strengthen and sustain the relationship, i.e., to raise public awareness of environment problems, to save the big trees, to

restore rivers and canals, and to create a green urban environment as demonstrated by activities of the Big Trees Project, the Seub Nakhasathien Foundation, and Huay Kwang Community.

The alliance network organizations need to support the working process of one another for mutual benefit. Organizing public forums offered the opportunity for the alliance organizations to promote their working approaches to the public and to fill the gap that each organization needed. For example, joining the Urban Forest project helped some alliance organizations which had only human and financial resources to gain knowledge and experiences they lacked. The forum, *Urban Forests and Sustainability towards Thailand 4.0* allowed people in the environment network to meet, interact and learn from each other. For instance, after the forum, the Department of Environmental Quality Promotion used the research conducted by the project team to plan other research projects about urban society environment.

In addition, the alliance network organizations shared information from the forums and activities they had done together, including on Facebook Fan Page of each organization. The social capital of the alliance organizations also played a role in the information presentation as it provided public understanding of urban forest issues in diverse dimensions. And that helped heighten public awareness of the management of an ecosystem where mutually beneficial coexistence between people, forests, and cities could be sustained.

### **Recommendations for Further Research Development**

1. The present research shows that social media and mass media can create widespread public awareness in urban forest issues. So there is a need to analyze the approaches used in pushing forward the issues in the next phase that will lead to another major research question, i.e., an urban forest management system and appropriate communication approaches for the target audience.
2. The target audience of this project includes mass media and urban dwellers. If the project advances to the level of area management, the feasibility study of the project is required and the target audience needs to be identified in order to achieve tangible success.
3. To develop a research project in communication that emphasizes social innovation requires financial resources for media production. If the project team decides to take this approach, a detailed cost analysis is required.

### **Expected benefits of Research**

1. Research findings can be applied for public communication management in other organizations or institutions, and can also be used as a baseline study for social communication research.
2. Research findings can be used to develop appropriate approaches for the dissemination of research results to a wider audience and to make aware of the importance of communication factors in the digital age.

3. This research is useful for analyzing trends in communicating research information and for studying future research.

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