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Abstract

Urban development projects will certainly bring social and most importantly economic benefits. Yet, they may cause different environmental and social impact issues and therefore can result in public objections. The general practice of public engagement in Hong Kong typically involves stakeholders' group discussions and agreements with prominent individuals and organized interest groups which may not represent all the views from the public. As a society evolves, its citizens demand a more transparent, fair, and participative manner for the developments undertaken by the Government and private developers. Public participation becomes one of the essential tasks of project proponents to meet the expectations and to ease the concerns of the public on a wide range of environmental, social, health and safety impact issues associated with the projects. The need for effective public engagement is therefore being demanded in Hong Kong. It has, therefore, become necessary to undertake a review of the current approach of public consultation to meet today's international best practice as well as the society's demand.

1. Introduction

As the human population grows continuously and urbanization takes place all over the world, urban development and redevelopment puts pressure on the environment and inhabitants of cities (To and Chung, 2014; UNDESA, 2012). The United Nations realizes that sustainability can only be achieved through a thorough consideration and analysis of the economic, social and environmental elements of development, and the decisions from such a planning and assessment exercise can be accepted by the society through active public participation (de Silva and Wates, 2012). Principle 10 of the Rio Declaration suggests that environmental issues are best handled with participation of all concerned citizens. Hence, governments should be responsible to enable citizens to have appropriate access to information concerning the environment, encourage public awareness on changes in social and environmental conditions, provide the public opportunities to participate in decision-making processes, and establish means so that the public can have access to judicial and administrative proceedings effectively (de Silva and Wates, 2012).

Public participation is a complex task. As stakeholders have diverse backgrounds, different interests, motivations, opinions and degrees of involvement, public participation requires adaptive management from project proponents, their expert consultants, and public relations agencies (Stringer et al., 2006; Lo et al., 2014). As Walters (1986) indicates, adaptive management is an approach that views policies including urban planning, urban development and re-development, etc. as experiments to be studied, such that the experiences gained at one stage will influence other stages of policy setting, communication, adjustment, and so on

(Rowe and Frewer, 2000, Stringer et al., 2006). As for public participation, many project proponents (particularly those in Asia) confuse this concept with public communication and public consultation (Lo et al., 2014). This confusion is partly attributed to the Confucius value that emphasizes on obedience, and partly attributed to policy makers who are unaware of the importance of social psychology and strategy of change management. Therefore, the purpose of this paper is to provide a literature review on public participation, adaptive management, and change management. In addition, we present a case in Hong Kong that illustrates the pitfalls of having inadequate public participation. We then suggest some quality management concepts and tools including the Deming cycle and the Tree Diagram techniques that can help project proponents to identify stakeholders, enable stakeholders to access, and provide information that are relevant to the proposed projects.

2. Literature Review

2.1 Public Participation

Public participation has been confused with some other activities involving the public such as public communication and public consultation (Rowe and Frewer, 2005; Stringer et al., 2006). In Frewer's article. public Rowe and (2005)participation is defined as the practice of involving members of the public in the agenda setting, policy development, and decision-making on projects and developments that interact with the environment and communities. In this connection, this definition is consistent with what public participation means in the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, also known as

Aarhus Convention (UNECE, 2013). In the associated document of this Convention (DETR, 2000), it was (and still is) agreed that the public should be given (a) the right to obtain information on the environment, (b) the right to justice in environmental matters, and (c) the right to participate in decisions that affect the environment.

Rowe and Frewer (2005) went further to differentiate between public participation and public communication in which information is broadcasted from project proponents to the public. Information flow in public communication is one-way. Hence, there is no involvement of the public per se because feedback from the public is not sought. When the public attempts to provide information, there is no official channel for the public to provide ideas and opinions to project proponents.

In public consultation, information is obtained from members (mostly representatives) of the public to project proponents that initiate such a process through invitations. However, there is no formal, open, and transparent dialogue between individual members of the public and project proponents. As most public consultations are conducted within a specific time frame, it is rather static and cannot reflect the changing nature of decision making when more new information is available. Hence, public consultation can be characterized by an invitation to the selected representatives of the public and information flows forward and then backward between project proponents and the selected representatives in a single cycle. Figure 1 shows key characteristics of the three forms of public engagement activities.

Based on this typology and how efficient of the full, relevant information elicited from all appropriate sources is transferred to (and processed by) the recipients and then combined to give an aggregate/consensual response, Rowe and Frewer (2005) identified four public communication, six public consultation, and four public participation mechanism subclasses.



Figure 1. Information flow in three forms of public engagement (Adapted from Rowe and Frewer, 2005)

2.2 Adaptive Management

Adaptive management indicates that it is impossible to make foolproof predictions of environmental impacts of human activities on complex ecosystems. It demands that project proponents and their environmental specialists retain the ability to respond to change and inaccurate predictions (Kwasniak, 2010). As suggested by Holling (1978) and Walters (1986), adaptive management was developed as an alternative management and policy approach to address uncertainties and surprises due to the complexity of ecosystems that react to human activities. In environmental assessment, predictions are normally made by specialists based on the contextual information, assumptions, mathematical and/or computer modeling, and simulations. Hence, uncertainties are always associated with these processes. Suter (1990) studied the types and sources of uncertainties and catalogued uncertainties in various ways. In general, uncertainties include natural and man-made environmental variability, measurement error and variance, extrapolation error, structural uncertainty in modeling, and even change in social and political goals due to changes in social briefs and values, budgets, and shifting policy directions. As mentioned earlier, adaptive management views resource management planning and program as experiments, in which all organizational policies are treated as alternative hypotheses and managers and/or decision makers update and revise their policies based on the new information gained from these experiments. The adaptive management cycle (as shown in Figure 2) has six key steps including (1) assess problem, (2) design, (3) implement, (4) monitor, (5) evaluate, and (6) adjust (Nyberg, 1997). The idea is similar to what quality management guru, W.E. Deming, advocated in his Deming (as known as the Plan-Do-Check-Act) Cycle that is now widely practiced in the world under ISO9001:2008 quality management system standard (as shown in Figure 2; To et al., 2011). Indeed, the Deming Cycle is a systematic series of steps for gaining valuable learning and knowledge for the continual improvement of a product or process. It is not only the founding philosophy of total quality management; it is a change management tool (Young and Wilkinson, 2001).



Figure 2. The Adaptive Management Cycle and the Deming Cycle.

2.3 Change Management

When a society evolves, the public demands the right to participate in policy formulation and decision making that may or may not affect their life directly. Hence, government departments and major organizations need to deal with changes in social and environmental expectations. As Deming (1986) asserted "It is not necessary to change. Survival is not mandatory," change is a reality to be embraced and managing change is critically important. Fortunately, Kurt Lewin (1989) - a pioneer in social and organizational psychology developed a threestage process for change management. Lewin (1989) proposed that a change process begins with unfreezing, which is created due to members' dissatisfaction with the status quo; then the process proceeds to the 'moving' phase in which members take up new roles and responsibilities as well as engage in new behaviors; the final stage is refreezing in which the organization should turn new ways as normal.

3. A Case in Hong Kong

The Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) is a very important infrastructure project in Hong Kong because this link will be connected to other high-speed rail networks in mainland China. The Hong Kong section of XRL is a 26 km underground system running from the West Kowloon Terminus to the boundary at Huanggang. As lands need to be taken back for building the facilities of XRL, land owners and the people who live on those lands will be directly affected. In particular, Choi Yuen Tsuen (CYT) villagers are the ones that will be severely affected by the project.

3.1 Public Consultation/Communication Method

The XRL project employed a number of public consultation and communication methods such as formal written consultation, panel meetings, focus groups, exhibitions, project websites, information centre, project hotline and publications.

In public consultation, project proponent organized panel meetings to involve the public with the attendance and involvement of government officials. Project proponent and government officials also co-organized meetings to inform and solicit views from members of the District Councils/Rural Committees and the local residents. Some individual and small group meetings were organized by project proponent to provide the affected resident(s) detailed information of the project and compensation and rehousing arrangement. The focus groups engaged Non-Government Organizations (NGOs) to obtain their views and identify their key environmental concerns. In public communication, a roving exhibition was held at many sites to inform the public about the project. Project website was launched to provide project details and updates while an information centre and a hotline were set up for direct communications with the community. Indeed, public views, opinions and recommendations were considered in the development and evaluation of alignment options to minimize environmental impact induced by the construction of the project.

By presenting the pros and cons of the proposed design of XRL, project proponent successfully obtained the approval from members of the Hong Kong Legislative Council.

3.2 Evaluation of the Current Public Consultation/ Communication Practice

The project was funded. However, strong objections and protests were made by some concerned groups such as the Shek Kong Choi Yuen Tsuen XRL Concern Group. The group set up virtual communities through social media and attracted a lot of coverage from other media such as newspapers, magazines, radio and TV. As a result, public engagement of this project can be considered as an example for future projects on how to include and manage new media and channels so as to improve the public engagement process continuously.

4. Some Suggested Public Participation Tools

As Turing who pioneered the development of computer science, cognitive science, and artificial intelligence mentioned in one of his groundbreaking papers (Turing, 1950) "there is no new knowledge

under the sun", it is not necessary to reinvent the wheels that have been developed by other people. In public participation, there are numerous ways that we can learn from quality management, marketing, social psychology, and organizational behavior. In these disciplines, researchers investigated employee participation, customer/consumer participation, and employee commitment that share commonality with 'public participation'. Here, we re-iterate the importance of two fundamental tools.

4.1 The Deming Cycle

As mentioned earlier, the Deming Cycle is a systematic series of steps that include (i) planning a work in great detail (with a lot of considerations and the readiness to changes), (ii) working on the plan without fear of difficulties and surprises, (ii) gaining valuable learning and knowledge during the process, and (iv) acting on the feedback collected from the process (also see Figure 2). Based on this approach or the similar approach, adaptive management, a society can manage its resources better while project proponents may have to give up the traditional approach of sequential design, engineering, and management.

4.2 The Tree Diagram

The Tree Diagram is used to break down a goal to specific actions. It is particularly useful when the goal is too complex and there are too many intervening factors. By repeatedly asking how to achieve the goal, sub-goals, and sub-sub-goals, it is possible to obtain the tree that is detailed enough for action. After that, other approaches such as the matrix method and prioritization matrix can be applied to select the most practical ways to achieve the goal. A typical tree diagram is shown in Figure 3. Nevertheless, the tree diagram must be created with inputs from all stakeholders or at least representatives from all stakeholders, not by project proponents, its specialist consultants, and public relations agency alone. The weightings of the resulting options can be obtained by using the analytic hierarchy process (Mak et al., 2014; Saaty, 1980; Saaty and Vargas, 2000).



Figure 3. Tree Diagram for public participation (an example)

5. Conclusion

Public participation is very challenging. There is no single way to achieving successful public participation. It is because the society evolves and people want to have a greater say through whatever channels they can utilize. Hence, public participation becomes a learning process for all people involved and project proponents, government officials, and the public shall learn from good as well as bad experiences in the past (just like the case we cited in Section 3). Besides, there are many planning and management tools that we can adopt to enhance the versatility and flexibility of public participation (just like the ones mentioned in 4.1 and 4.2).

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