

Housing Development and Informal Settlement Prevention Plan of Bungkan City, Thailand

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Received 3/5/2021 Revised 22/3/2022 Accepted 24/3/2022

Abstract

An important challenge to delivering adequate housing solutions in Thailand is associated with management problems that lack an effective mechanism to connect between concerned organizations. It is necessary to equip local stakeholders with housing management capacity under a participatory process. In this project, a housing development plan that included extensive community participation was delivered to Bungkan province which is the most recently established province in Thailand (2011) and as such, still lacked such a plan. The research project, “Housing Development and Informal Settlement Prevention Plan of Bungkan City” was conducted collaboratively by the National Housing Authority of Thailand and Khon Kaen University. The three major research objectives were to: formulate a city housing development plan for Bungkan city; create a participatory process of stakeholders that empowered their capacity through the planning process; and create a mechanism for housing development which connects key agencies from the national level to the local community. The research applied the Ladder of Participation (Arnstein, 1969) as the theoretical framework, with a mixed scale of the ladders including Consultation, Partnership, and Delegated Power. Data gathering and the planning process used a mixed method approach that included geospatial analysis through a Geographic Information System application, in-depth interviews, a questionnaire survey, stakeholder meetings, study trips, workshops, and exhibitions. At the end of project, the research achieved a housing development plan for Bungkan city with a new vision that included 5 strategies, 12 plans, and 46 projects. The research found that the key factor of project success was stakeholder’s inclusion at the beginning stage to the last stage of operation. In particular, the partnership concept in the form of joint committees shaped trustworthy relationships between stakeholders and allowed them to share a sense of ownership.

Keywords

Urban Housing Planning; Bungkan City; Participatory Planning; Ladder of Participation Framework

1. Significance of the Problem

Bungkan is a small rural-agricultural production-based city located within the 76th and most recently (2011) established province of Thailand. The relatively remote province is bordered directly to the north by the Mekong River and Laos. Bungkan was promoted to a new administration center role for the north of the northeast region following the 1994-1997 decentralization policy of the Thai constitutions. In 1994 the Thai Cabinet approved the Act of the Tambon Council¹ and Tambon Administration Organization which was followed by the declaration of the constitution of the Thai Kingdom that announced the Act of Provincial Administration Organization a few years later, in 1997. This was a significant evolution of the Thai political structure from centralization to decentralization². Based on lessons learned from many provinces across Thailand, the National Housing Authority (NHA), the biggest public housing organization in Thailand, took action in Bungkan province to address the absence of housing development and informal settlement prevention plans. In particular, housing problems in Thailand reflect shortcomings in policy and management that lack an effective mechanism to connect between national government, local administrations, and communities. More specifically, it was necessary to build capacity with local stakeholders in the participatory process of housing management. Hence, NHA collaborated with the Urban and Regional Planning Program, Khon Kaen University, to conduct a research project "Housing Development and Informal Settlement Prevention Plan of Bungkan City". The project was a crucial mechanism that enhances local organizations and communities to support their effective management in housing development plans according to the Act of Decentralization to Local Administration Organization.

1.1 Objectives of the Research Project

There were three major objectives for the project. The first objective was to formulate a housing development and informal settlement prevention plan for Bungkan city. The second objective was to create a participatory process for stakeholders from all sectors concerned with development of the housing plan in the study area and also to empower those stakeholders in the housing plan and slum prevention process so they gained knowledge, understanding, and experience in the process of housing development planning. Lastly, the study sought to create a mechanism for housing development and informal settlement prevention in Bungkan city by connecting national government, local administrations, and communities.

1.2 Scope of Research

The study focused on the Bungkan city plan which includes the four local administration organizations; namely, Bungkan Sub-district Municipality, Wisit Sub-district Municipality, Non Sombun Sub-district Administration Organization, and Bungkan Sub-district Administration Organization. The overall area of these four local administrations is approximately 154.19 sq.km. The project examined the expansion of housing, population growth and migration, and social and economic circumstances in the city that were declining and potentially were inducing problems of informal settlement in the city. The study also covered analysis and forecast of housing demand and appropriate areas for housing. The target sample group of the study was divided into six groups; central governmental, local government, public and civil society, NGOs, private sector, and academic institutions. The key methods implemented in undertaking the research included geospatial analysis through Geographic Information Systems (GIS), in-depth interviews, questionnaires, stakeholder meetings, study trips, and workshops.

1.3 Research Framework

1.3.1 Research Theoretical Framework

The Ladder of Participation was selected to guide this research because it is a research framework that is agreeable to the research objectives. Specifically, objectives 2 and 3 search for opportunities to enhance stakeholders' co-operation and stakeholders' inclusivity mechanisms. Although the agnostic and antagonistic planning theory is participation-oriented, a central and normative premise of this theory is that "conflict is a productive force" (Pløger, 2004: 87). Furthermore, the German planning scientist Dietrich Fürst spoke of a "dilemma between the need for consensus in planning and the growing conflict intensity of fragmented societies" (Fürst, 2018: 1717). Our research did not place emphasis on conflict, but rather, sought to avoid stakeholder conflict through positive sharing experiences between stakeholders and promoting these sharing experiences to build public participation. Therefore, agonism did not fit to our research objective while the Ladder of Participation theory by Sherry Arnstein, which has continuously been revised and applied from the past to current³ seemed to be a better reflection of our project philosophy.

The Ladder of Participation (PAR) theory, first proposed by Arnstein (1969), views citizen participation as a term for citizen power. Thus, the concept of 'scale of PAR' was defined as the redistribution of power from government to citizen with eight rungs from manipulation to citizen control. Our research project applied a mixed scale of the ladder to deal with the customized context of Bungkan city. Three rungs suggested scales of participation for a housing development and informal settlement prevention plan based on the degree of government willingness in carrying out community mutual-help projects, beginning with Consultation, Partnership and lastly Delegated Power.

- Consultation is the fundamental rung of the ladder that consists of a two-way flow of information from officials to the communities related to their rights, responsibilities, and options to provide feedback or negotiation from the citizens (Guaraldo Choguill, 1996).

- Partnership is the middle rung on the ladder. Stakeholders, the community, and planners agree to share planning and decision-making responsibilities regarding housing development plans involving community participation through structures such as joint policy committees, planning committees, survey committees, and eventually other informal mechanisms for solving conflicts.

- Delegate Power is the highest rung on the ladder of stakeholder's participation proposed for Bungkan. Communities share a majority of seats or genuine powers on formal and informal decision-making bodies, (e.g. committees), over a project. Stakeholders are expected to drive their own improvements, including development of possible solutions with the assistance of outside organizations or other allies. Importantly, the community has a demonstrated control of the project implementation and an influence on the processes and outcomes of the development project (Samuel, 1986).

1.3.2 Research Methodology

The research process consisted of four steps. The first step included two sub-stages, a literature review, and establishment of the research framework, the mixed ladders of PAR. The literature review provided a broad framework of formal and informal housing provisions and the relevant policies and plans that are discussed in conjunction with the public participation concept. The document survey also assembled key terms and concepts of the housing planning, public participation in planning, and Bungkan city as a major subject of the study. In order to address the research questions and analyse data, a mixed methods approach to the PAR theory was established to provide a framework for creating the participatory process of stakeholders from all

concerned sectors related to development of housing plans and also empowering those stakeholders to initiate an improved, inclusive, housing planning process.

The second step developed research methods and tools for data gathering and conducting Bungkan housing fieldwork. The research included five methods to collect primary and secondary data. The primary data included many aspects of Bungkan housing characteristics, such as land use, building use, housing demand, and housing problems. The five methods of data collection consisted of 400 questionnaires, in-depth interviews with 20 key persons from the sampling group, geospatial analysis using Geographic Information Systems (GIS), community surveys, and an archival study including aerial photos, publications, and visual and audio recordings.

Under the third step, data gathered from the field study were analysed and discussed within the research framework. Based on primary and secondary data analysis, the study found that three ladders of PAR were suitable and consistent with stakeholder knowledge background, skill, and demand. The study subsequently employed several methods to encompass the following participation ladder rungs as a framework of creating a housing strategic plan with different objectives.

The 'Delegate Power' rung was aimed at promoting local stakeholder shares in the Working Committee to influence the housing planning process and outcome. The study classified stakeholders into six target groups using the Miro visual collaboration platform and based on their support-interest-contributions, power, and influence. The study team encouraged the stakeholders to set up two appointed committees, an Advisory Board and a Working Committee (working groups of survey, planning, local group-based participants). The next rung in the PAR ladder is "Consultation", which addresses the second research objective. The study empowers local stakeholders to better understand and enhance their skills and knowledge about PAR and housing plans. Stakeholders learned from exhibitions, lectures, training, workshops, case study lessons learned and analysis with research framework a mixed scale of the Sherry Arnstein's participation ladder and Miro. Importantly, face to face meetings were an effective way for empowering local people because they trust in tangible outcomes and practical experience rather than abstract knowledge. The study organized excursions for stakeholders to meet local and international communities who experienced a housing plan development process, with three domestic trips to Lio, Chantaburi, Bangkok provinces and one international trip to Malaysia. The last rung on the PAR ladder is 'Partnership' which addresses the third the research objective. 'Partnership' involved searching to create new mechanisms for Bungkan housing development that connected a variety of networks at different scales, from local to city networks. The study promoted an approach where stakeholders played a role as planner with the research team in the housing planning process, from the first to the final step. Stakeholders were asked to share their resources, actions, and idea contributions with the public.

The final step of the study was development of a housing strategic plan which is a component of the first research objective. The study employed a bottom-up approach to the planning process. The Working Committee played a leading role in the five civil society meetings. They conducted brainstorming, focus group, and discussion exercises to support development of a common vision for the Bungkan housing plan. Furthermore, they generated ideas, created criteria for decision making, held discussions and voting for the finalized the plan. The final form of the plan contained a Guiding Vision, 5 strategies, 12 plans, and 45 projects. The plan also required some mechanisms to drive and monitor the plan implementation, and the two appointed committees accordingly set up a monitoring committee as a final step of this research project. The relationships between the four steps of the research methods are illustrated in Figure 1.

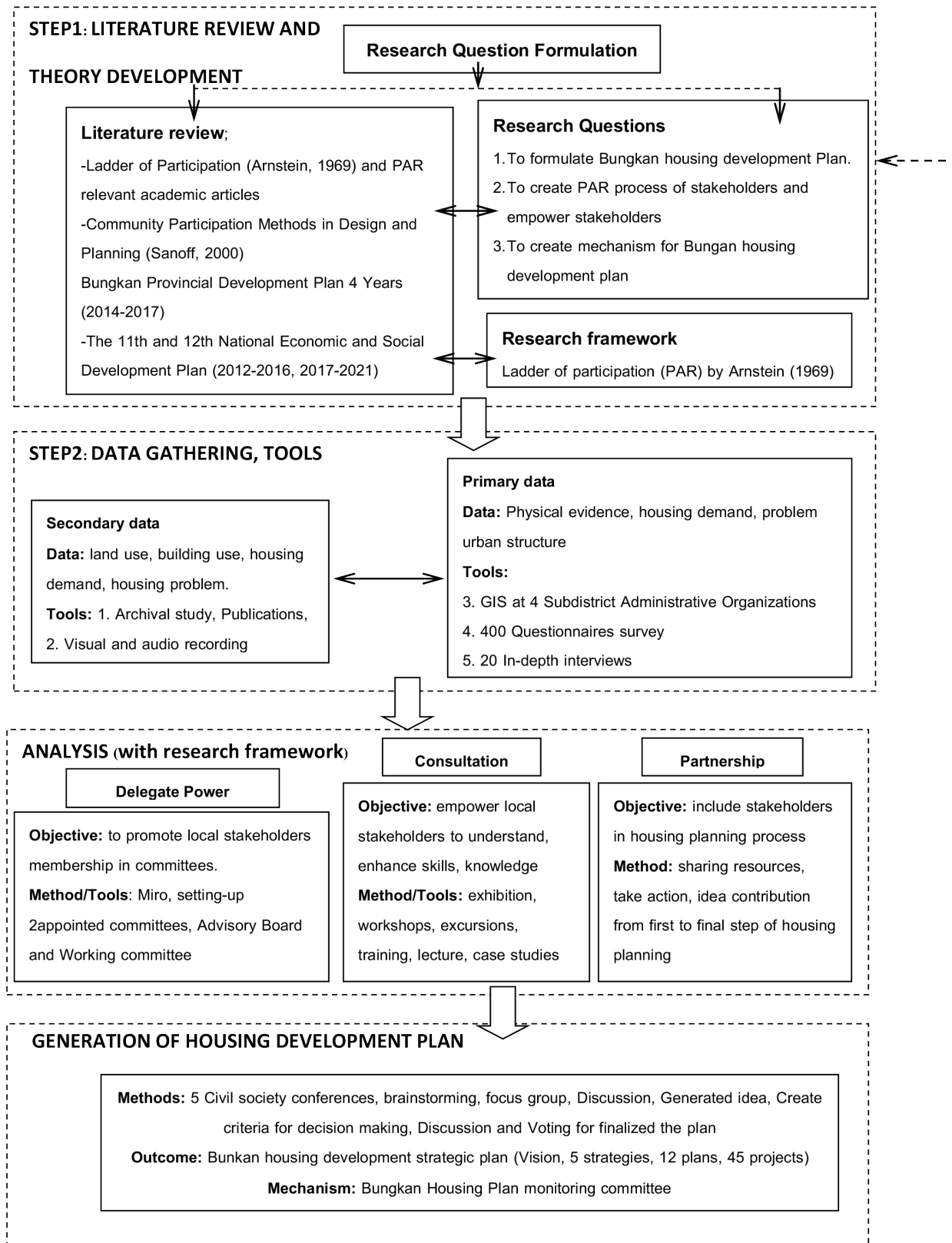


Figure 1 Research method flow chart (Dhabhalabutr, 2021).

2. Literature and Report Review of Bungkan City Housing Background and Relevant Factors

2.1 Geographical Setting

The project area for the housing development and informal settlement prevention plan in Bungkan Province covered a part in Muang Bungkan district that consists of four municipalities whose roles were as the center of the province after the establishment of Bungkan Province in 2011. The study area is bordered by the Mekong River. Topographically, it is a plateau area with ponds and wetlands scattered all around. The two major wetlands in the area are Bungkan Swamp and Kud Ting Swamp which are registered as Ramsar sites due to their international importance as distinctive and biologically diverse ecosystems connected with the Mekong River. In terms of climate, it is hot and -the average of rainfall is 1,200-1,400 millimeter per year with the average annual temperature in the range of 26-28 degree Celsius. It receives the influence of monsoon storms from the east of China, Vietnam, and Laos during the late rainy season.

2.2 Land Use, Transportation System, and Infrastructure Service

The total area of the project covered 147,210 Rai (around 23,554 ha). Most of the area consisted of rural and agricultural communities. There were two arterial streets in the study area, Highway No. 212 (Nong Khai-Vientiane) along the Mekong River and Highway No. 222 (Sakon Nakhon-Bungkan) which connects to No. 212 at the Bungkan municipality. The collector street system in the community area was in a grid pattern connected to the arterial streets. Locations of services and infrastructure are shown in Figure 2.

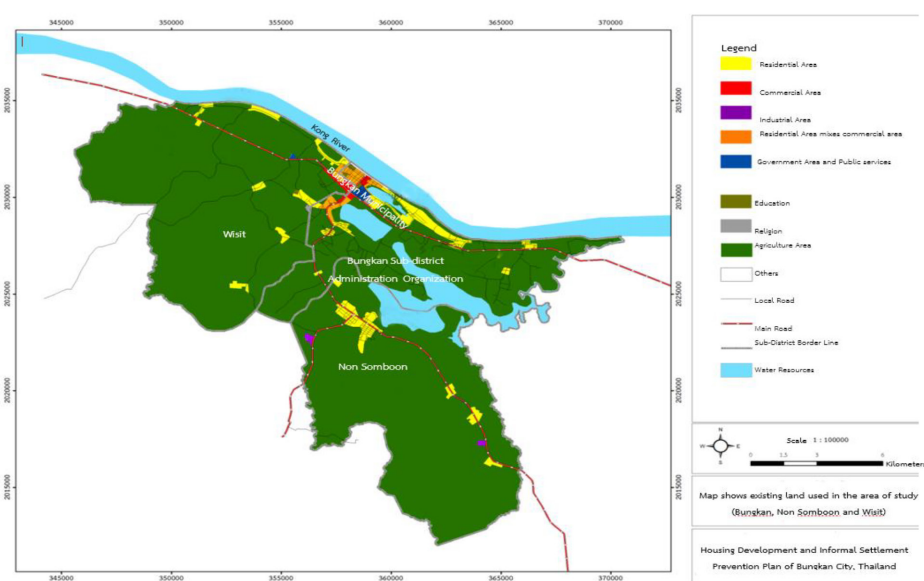


Figure 2 (Left) Map of existing land use survey at the study area covering 4 local administrations: Bungkan SAO, Bungkan Municipality, Non Sombun SAO and Wisit SAO (Right) (Tantivess, 2015)

2.3 Population and Housing Census in the Area

According to the population and housing census of 2015 by the Department of Provincial Administration, Ministry of Interior, there were a total of 27,279 household units in the project area. The total population of 84,155 consisted of 42,340 men and 41,815 women in the project area. The total number of housing units in the project area was 10,770. The majority of the population had an agricultural career, residing in their own

houses and land. The houses were detached houses. Informal settlement locations and population were not found in the area of study in 2015 (GIS and filed survey by November 2015). However, NHA and the Bungkarn governor suggested that the Bungkan housing plan should forecast the locations that potentially could become informal settlements as well as recommending measures for preventing establishment of informal settlements.

3. Research Methodology and the Result of Fieldwork Study Process

The research methodology consisted of five major stages as follows:

3.1 Cooperative Data Survey and Data Gathering at Bungkan City (see Figure 3)

After completing the literature review and research planning, the research team conducted meetings with organizations to introduce the project; the team also introduced the project to the Mayor and chiefs of provincial organizations in Bungkan and the executive of four SAOs (Subdistrict Administrative Organization). Next, the team conducted a data survey and field trip for data collection of the study area. Lastly, construction of Geographic Information System (GIS) for geospatial analysis in the four SAOs was undertaken



Figure 3 Cooperative data survey and data gathering (Dhabhalabutr, 2015).

3.2 Identify Project Stakeholders and Promoting Target Group Person Cooperation

This stage aimed to identify, classify, and select key persons as project stakeholders and also promoted networking among them. The research team conducted meetings with target person s who were divided into six groups as discussed in Section1.2 and 1.3.2.

3.3 Meetings, Exhibitions, and Workshops

Several official meetings were designed in the research process to address different objectives such as establishing Advisory Board Committee and Working Committee members, promoting and setting up a network across target groups, empowering stakeholder skill and knowledge. To succeed in the goals and objectives of the project, the research team conducted meetings as follows (see also Figure 4);



Figure 4 Meetings, exhibitions, and workshops (Dhabhalabutr, 2014-2015).

3.3.1 Civil Society Conferences were a participating forum of all stakeholders who play a “partnership role” in the formulation of the Bungkarn Housing Development Plan and Informal Settlement Prevention Plan and Bungkarn Housing Strategic and Vision. The 1st Civil Society Conference was held on Wednesday 31st October, 2014 at the Convention Hall in The One Hotel, Muang District, Bungkan Province. The objectives were to introduce the project and the team, to establish the committees and the working groups in the area, to initiate knowledge and understanding of the process in city and housing development, housing management and related laws. The important activity of the conference was brainstorming related to existing and future issues of Bungkarn housing and informal settlement such as urbanization, housing trends, demand, and housing problems. The 2nd Civil Society Conference was held on Wednesday 9th April, 2015 at Sirin Thara Room in The One Hotel, Muang District, Bungkan Province. This conference provided a progress report on the development of the housing management plan by the Working Group, as well as a presentation on the data survey from the meetings with organizations and data collection for geospatial analysis in GIS from the four local administration organizations. Conference attendants gave feedback, verified data, and provided suggestions to the Working Group for further improvement. The 3rd conference aimed to promote stakeholders as the main actors in the role of shaping the framework of the Plan. The research team conducted brainstorming sessions to outline the housing development plan including the draft vision and draft strategy of the housing planning in Bungkan Province. Subsequent to the 3rd conference, the research team developed the Plan’s outline to housing development vision and plan for the next meeting. The 4th Civil Society Conference was held on Tuesday 3rd June, 2015. It was held to present the Housing Development Plan and Informal Settlement Preventing Plan in Bungkan Province and the details of the project under the plan including vision, 5 strategic plans, 12 project plans, and 45 projects under the plan. Lastly, a conference was held on Friday 22nd August, 2015 to present the final results of the Plan and Bungkarn Housing Vision to the Bungkarn governor and head of Bungkarn administration offices. Stakeholders gathered as part of the meeting in a measure to encourage the Governor to include the housing plans within the Bungkarn province strategic plan for the next fiscal year.

3.3.2 Meeting of promoting skill, knowledge, and network empowerment. The study provided 3 exhibitions about World’s Wetland and Case Studies The Model of City Development from Agricultural Community;

Agricultural Tourism and Culture along Mekong; and Vision, Strategy and Projects under Housing Development Plan of Bungkan. In addition, a panel discussion, held on 22nd November, 2014 at the Convention Hall of The One Hotel, focused on the topic concerned with the area –wetlands and agricultural tourism. There was a lecture on the developing model of agricultural tourism and wetlands by speakers from the Tourism Program, Faculty of Management Science, Khon Kaen University, to explain the potential for such tourism and provide stakeholders with basic knowledge and to open a stage of discussion to apply the knowledge gained to authentic practice in the project area.

3.4 Study Trips

One of the research stages that was specially designed for empowerment and enhancing stakeholder's knowledge and skill was study field trips to learn from real people, real practice, and real experience. These domestic and international study trips had the potential of becoming a model for our study and certainly were helpful in informing components of the housing plan (see Figure 5). Face to face meetings to observe and discuss best housing policy practices created powerful and positive impacts for the stakeholders because tangible example projects confirmed that effective housing development plans are possible.



Figure 5 Study field trips in Thailand and Malaysia (Dhabhalabutr, 2014).

- 1st Study trip (local) to Phu Ruea district and Chiang Kan district, Loei province examined the theme of Formulating Housing Plan in the Agricultural and Cultural Tourism Area along Mekong River, held during 19-20 March, 2014. The participants examined the model of determining vision, policy, discipline, and plan formulation to promote tourism along with preservation of environmental worth.

- 2nd Study trip (local) to Panasnikom district, Chon Buri Province during 2nd-4th April, 2014 with a focus on Development to Become a Livable City. The participants learned academic principles, practical models and criteria of city development according to the principle of 'Livable City'.
- 3rd Study trip (international) to Kuching City, Sarawak, Malaysia during 13th-16th August, 2014 had an aim to enhance the knowledge and understanding of local administration organizations and related stakeholders.

3.5 Data Analysis

3.5.1 Analysis of the city expansion and informal settlement formation

The study examined the expansion of urbanization and the impact that activities in the project area might have on the business center in the area of the municipality of Bungkan Sub-district. It was concluded that urbanization would tend to expand to the area of the municipality of Wisit Sub-district because the area was capable of supporting new development projects. Moreover, lands were identified that had the potential for agriculture along the Mekong River and around Kud Ting Swamp inside of the project area. This was the area that was globally valuable in terms of nature (see Figure 5 top left).

By 2015, Bungkan was at the early stage of development to become the province center. The primary issue related to informal settlement within Bungkan province, especially in the studied area, was prevention measures rather than problem solving. The GIS analysis showed that there was no informal settlement in the study area at the time of study. However, the future expansion of the city (see Figure 5 top left) plays an important role in terms of identifying some potential areas that may transition into informal settlement because housing supply rate was low, while employment sources and housing demand are projected to be higher in the future. Transportation and service of infrastructure require more accessibility options and well development. The area is Wisit Sub-district, municipality of Bungkan Sub-district and Non Sombun Sub-district, particularly in the areas of existing commercial and residential land use along Highway No. 212 (Nong Khai – Vientiane) and the Mekong River as well as Highway No. 222 (Sakon Nakhon – Bungkan). Therefore, housing development under the master plan of Bungkan province promoted informal settlement prevention measures in the Bungkan housing strategic plan called "Enhancement of Housing Security and Living Security". The strategy focused on three major issues of informal settlement prevention. Firstly, sufficient space allocation to meet housing demands is required to ensure that all low-income households have formal and land tenure housing. The second concern is related to formulating standards and regulations and promoting availability of rented houses, rooms, and dormitories. The last issue considers sustainable prevention of the emergence of informal settlement in the comprehensive plan area. There were 8 projects developed under the strategy of informal settlement prevention including: the project of livable rental housing, dormitories, and apartments (long phase 3-5 years), the project of establishing a land bank for low-income residences (long phase 3-5 years), and the project of establishing Bungkan Housing Development Fund (long phase 3-5 years).

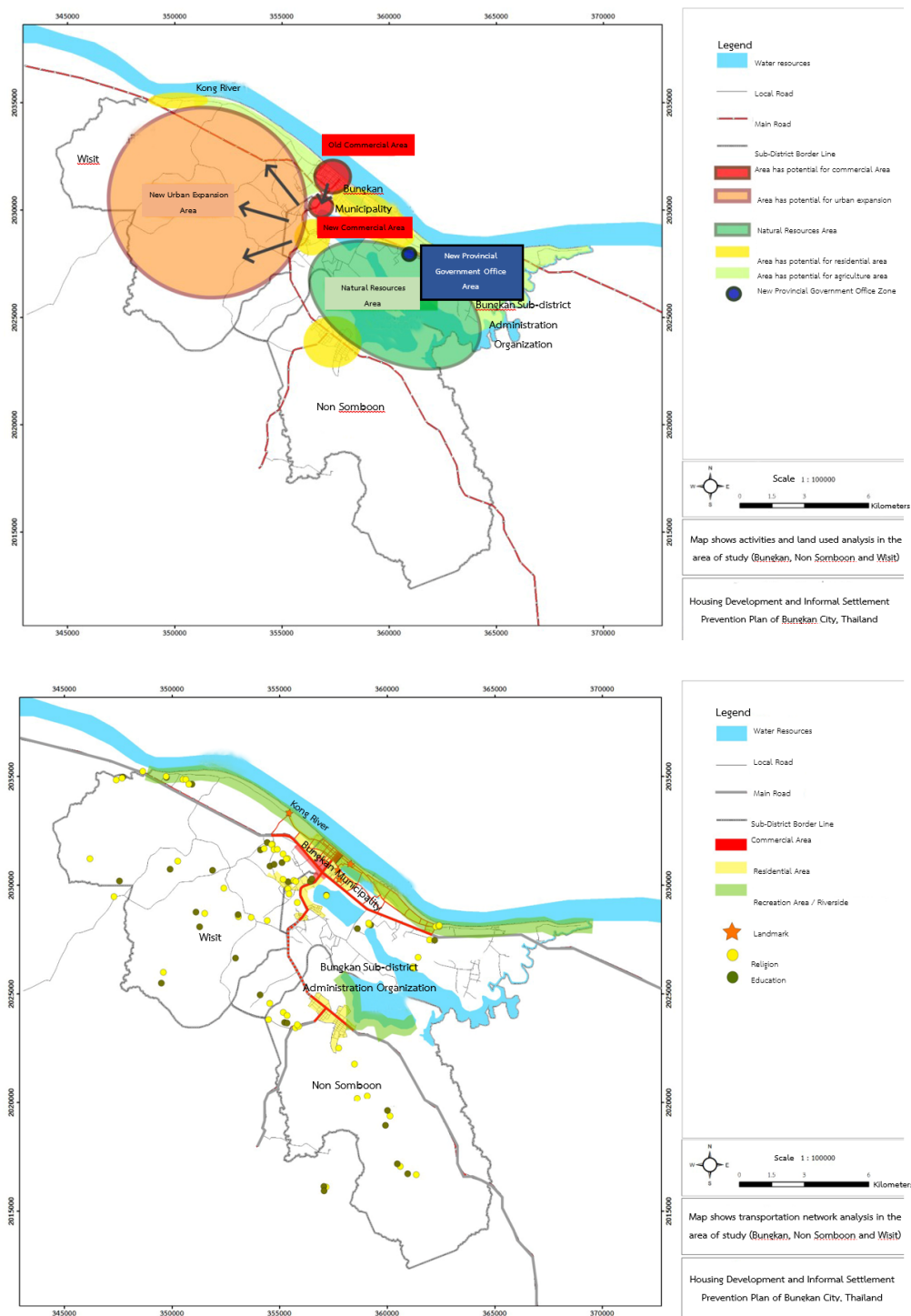


Figure 6 (Top) Map of activity analysis and land use at study area

(Bottom) Map of topography potential analysis for housing development in study area (Dhabhalabutr, 2015).

3.5.2 Analysis of Housing Demand in the Project Area

The analysis of potential for housing development was based on the main four criteria which were transportation, the service of infrastructure, area of job sources or commerce, and value of land from the unimproved value of land in the accounting period of year 2015 by the Treasury Department. In terms of housing demand of Bungkan city in the future, from the forecast, by 2023 Bungkan city would have a housing demand of approximately 15,698-25,358 units (see table 1). Most of the housing units targeted household

income levels of approximately 10,000-30,000 baht/month and lower than 10,000 baht/month. In general, this represents the low to upper-low income households who can afford monthly rental rates of approximately 2,000-3,000 baht. Based on the key factors, the data in table 1 reveal that local authorities should formulate a housing development and informal settlement protection plan. Importantly, the formulation of the Bunkan housing plan must address the new approach of the 1994-1997 decentralization policy of Thai constitutions that emphasized decentralization and public participation in public services.

3.5.5 PAR Rungs and Study Findings

As noted above, the study applied a mixed scale of “Ladder of Participation (PAR)” approach, first proposed by Arnstein (1969), as a research framework. The application of PAR in this study employed three customized scales (or rungs), Consultation, Partnership and Delegated Power because the data from the fieldwork surveys, interviews with key persons, and civil society conferences suggested that no single rung of PAR can apply to groups of stakeholders who have different levels of understanding, willingness, and action with the planning process. Firstly, the Consultation PAR was applied to educate and empower local stakeholders who have a low level of understanding about the PAR concept. The study employed formal and informal lectures, discussions, case studies analysis, exhibitions, and field study trips to address this issue. The second rung of PAR in this study was Partnership. The study found that taking action and tangible outcome collectively provide powerful knowledge that can encourage stakeholders to believe and take action themselves. Hence, the stakeholders must join the planning process from the start to the end of design. Partnership is also shaped by public sharing and responsibility from stakeholders because they have to share resources, time and ideas in the planning process. Through the PAR process, stakeholders gradually gained a sense of project ownership and team building. Lastly, Delegated Power is applied to empowerment of local stakeholders and decentralization of the bureaucratic top-down system to a more horizontal structure, or even bottom-up approach. Stakeholders have an opportunity to exercise their authorized power, through committee appointments. The establishment of community committees was designed to provide substantive input from local stakeholders, rather than representatives from government agencies. The appointed Working Committee had 15 members, with 10 representatives from local stakeholders including the temple master, the leader of a local fishing group, rice and vegetable groups, a primary school, and 6 representatives of local villages and local wisdom elites. The remaining 5 members represent government agencies including 4 representatives of the Sub district Administrative Organization and 1 representative from Bungkan Provincial of Natural Resources and Environment. The ratio between local stakeholders and government agencies was 2:1. The large proportion of local stakeholders in the committee helped ensure a decision making process that met the real needs of the local community to address the concept of Delegated Power. Finally, the research adopted the concept of PAR to promote an active process of field study. Specifically, the research applied concepts of consultation and partnership as an outline of action because the partnerships focused on sharing agreements and responsibilities from all stakeholders that created a sense of belonging and long-term commitment from stakeholders.

Due to the fact that formulation of a housing plan for Bungkan was done on a medium-long term planning scale, at the beginning stage of becoming a city and the beginning of city development to be the province’s center, the point that primarily deserved attention in terms of housing demand of Bungkan, especially in the studied area, was the allocation of housing for government staff. Government staff are in categorised in upper low income group but they was put in first priority of Bungkan Housing Development plan because Bungkan provincial office requires to promote welfare service to young and early of government staffs who has low income salary and convince them to work for long term in Bungkan where infrastructure service are under

construction. They were the group that had higher demand of housing, compared to other groups. This included consideration on management of safety in the housing environment: close to government office center, and comprised of effective and complete basic services.

Table 1 The conclusion of Bungkan housing demand for year 2023 (Dhabhalabutr, 2015).

Household earning per month	Housing demand based on population expansion		Housing demand based on economic and employment expansion		Total household unit 2023	
	Min estimation	Max estimation	Min estimation 20%	Max estimation 50%	Min estimation	Max estimation
< 10,000	3,295	4,168	1,305	3,264	4,601	7,432
10,000 -30,000	5,611	7,097	2,223	5,557	7,834	12,654
30,000 – 50,000	1,670	2,112	662	1,654	2,331	3,766
> 50,000	668	845	265	662	933	1,506
total	11,244	14,222	4,454	11,136	15,698	25,358

4. Research Findings

The tangible results of meeting and workshop arrangements are the vision in housing development of Bungkan as “Bungkan: Livable City for All”. The strategic plan for Bungkan was able to be effectively integrated with the Bungkan Province strategic policy of the targeted area. Next, the formation of the two committees; Advisory Board and Working Committee, became the key mechanism to driving plans and projects under the Bungkan housing development strategy in the longer term. Lastly, the staff of local administration organizations and the community in the study area were trained to more effectively participate in planning for preventing/ solving problems related to housing development.

The strategies and action plan were formulated in several stages and by applying a variety of tools. Focus group meetings and discussions in three Civil society conferences were important. Next, the PAR in housing planning is conducted through workshops with the Working Committee and local stakeholders. Furthermore, to establish a common vision the process applied voting and small group discussion. Finally, plans and projects were created by idea generating technics; brainstorming and 5W (what, when, who, where, why)

4.1 Vision and Housing Development Strategy for Bungkan

Formulation of a housing development plan and informal settlement prevention plan in Bungkan city involved a holistic development approach to serve the demands of all stakeholders. The focus was on the role of Bungkan as the center of agriculture, commerce, and tourism at the border connecting to neighbouring countries of the Indo-China area, Lao PDR and Vietnam. In particular, the potential of developing eco-tourism and/or agricultural tourism was examined. The research team analysed and evaluated the related factors to establish the vision in housing development of Bungkan as “Bungkan: Livable City for All”. The project proposed housing development strategies for the Bungkan under the idea of liveable city using 5 strategies as follows (also see figure 6 and table 2):

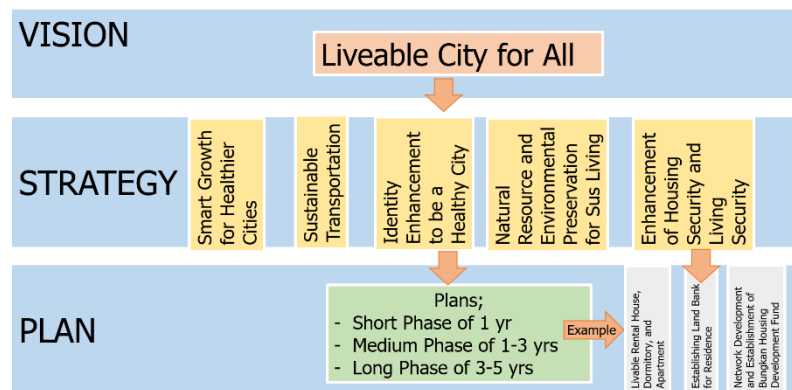


Figure 6 Vision and strategy plan under the project of housing development plan (Dhabhalabutr, 2020).

- 1) Strategy of City's Smart Growth for Healthier Cities
- 2) Strategy of Sustainable Transportation
- 3) Strategy of Community's Identity Enhancement to be a Healthy City
- 4) Strategy of Natural Resource and Environmental Preservation for Sustainable Living
- 5) Strategy of Enhancement of Housing Security and Living Security

There were 12 plans under these strategies that were divided into 3 phases: the project plan of the urgent phase or short phase of 1 year (year 2015), the medium phase of 1-3 years (year 2017), and the long phase of 3-5 years (year 2020).

Table 2 strategies, plans and some examples of projects under plans.

Strategy	Plan	Project
City's Smart Growth for Healthier Cities	The plan on development of infrastructure system was aimed to develop an effective and sufficient infrastructure to meet the demand of people in Bungkhan city	The Project of Waste Management with Community's Participation such as the campaign to have the community participate in waste sorting (medium phase 1-3 years)
	The plan on residents' healthiness was aimed to improve the city's landscape and environment. The plan sought to increase the recreation space in response to the demand of people in the area and to promote food security for people in the area.	The Project of Recreation Area Development around Nong Bungkhan (short phase 1 year)
	The plan on security in life and properties was aimed to increase security in life and properties of the people in the area so that the people were living with sense of security.	The Project of Effluent Treatment System of City/Community (long phase 3-5 years)
Sustainable Transportation	The plan on promoting and developing public transportation was aimed to develop sufficient public transportation between the communities in the study area. The system would facilitate and provide equality in accessibility to the area.	1. The Project of Improving Physical Appearance of the Road along Mekong and Meechai Road to Construct Bike Lanes and Sidewalk (medium phase 1-3 years) 2. The Project of Public Transportation in between Community and Government Center (long phase 3-5 years)
	The plan on promoting walking and use of bicycle was aimed to sustainably develop the transportation system in the study area. The plan was to stimulate and promote travelling that was not dependent on personal cars and to create an environment that was suitable for walking and using bicycle.	1. The Project of Public Bicycle for City Tourism (long phase 3-5 years)

Table 2 strategies, plans and some examples of projects under plans. (continue)

Strategy	Plan	Project
Natural Resource and Environmental Preservation	The plan on enhancing knowledge and understanding of natural resources in the community area was aimed to create a natural resource database for development and preservation planning at the provincial level. The objective was also to stimulate recognition of the value of natural resources in the area and also to promote participation of the people in preservation of natural resources in the area.	The Project of Curriculum of Natural Resource and Local Environment Preservation for Public, Including Integration to Bungkan's Schools Teaching and Learning (long phase 3-5 years)
	The plan on preserving and protecting natural resources and the environment that were valuable to the city was aimed to preserve and protect valuable natural resources and the environment to preserve a balance of eco-system services around important water sources, to preserve the quality of water resources, to create the image of cultural landscape tourism in the area, to preserve the way of life that was the identity in the area, and to create a development framework in the city with a balance of development and preservation of natural resources and environment.	1. The Project of Recreation Area and Natural Trail Nong Kud Ting, Non Sombun Sub-district (short phase 1 year) 2. The Project of Plan and Regulation Formulation for Development and Preservation Management of Natural Resource and Environment in the Area with Participation of People, Private Sector, and Organizations in the Operation (medium phase 1-3 years)
Community Identity Enhancement	The plan to promote participation of the community and stakeholders in the identity enhancement process was aimed to create understanding in roles, duties, and responsibilities of civil society in four SAO areas towards the city, to enhance the community's identity to promote a strong community, to enhance the sense of belonging, and to promote pride in local art and culture and local tradition.	1. The Project of Training for Local Organizations Responsible for City Preservation and Restoration (medium phase 1-3 years)
	The plan on culturally valuable residence and environmental improvement was aimed to develop the environment and landscape of Bungkan city so that it has a unique identity to sustain, preserve, and restore the residents with their local cultural identity, to create a sense of love and pride in self, community, and city, to create a connecting landscape between the areas of commerce, tourism, and residence, to improve the physical environment in declining areas so they are clean, safe, and appropriate for habitation, and to promote the identity of local architectural features of the city and to extend the community/eco-tourism industry along Mekong River.	1. The Project of Walking Street on Friday, Saturday, and Sunday (short phase 1 year) 2. The Project of Plan Formulation for Renovation of Residential Neighborhood with its Local Culture Identity (long phase 3-5 years)
Enhancement of Housing Security and Living Security	The plan on space allocation to support future housing to be sufficient for demands	The Project of Establishing Land Bank for Residence (long phase 3-5 years)
	The plan on formulating standards and regulations and promoting rented houses, rooms, and dormitories	The Project of Livable Rental House, Dormitory, and Apartment (long phase 3-5 years)
	The plan on sustainable prevention of the emergence of informal settlement in the comprehensive plan area	The Project of Network Development and Establishment of Bungkan Affordable Housing Development Fund (long phase 3-5 years)

4.2 Formation of the Committees

Another research outcome was the formation of committees. Two appointed committees were the Advisory Board and Working Committee. The Advisory Board consisted of experts-provincial administrative-representatives of communities such as the Bungkan Mayor, the Office of Natural Resources and Environment of Bungkan, World Wide Fund Thailand, and Chief Executive of the four SAOs. They are responsible for overseeing the

housing policy, determining a clear framework of the plan and methodology, and to monitor a strategy plan and project implementation in the target area. The Working Committee had 15 representatives of local groups such as three communities, and informal community leaders such as an abbot, local wisdom elites, and the leaders of agriculture, farmer and fishery groups. Local stakeholders occupied the majority number of the committee at 10 of 15 representatives to promote a decentralized structure in the planning process, consistent with the PAR framework.

5. Conclusion and Recommendations

Bungkan Province Housing Development and Informal Settlement Prevention Plan is tangible evidence that the participatory process of stakeholder inclusion from all sectors concerned with development of housing is a practical method that produces positive results. The Bungkan city's vision with five strategic plans was the integration of city roles, city potentiality, and uniqueness of Bungkan to comply with the development policy at three levels: the National Economic and Social Development Plan, Development Strategies of Bungkan Province, and Local Administration Organization Development Strategies. Next, three scales (or rungs) of the Ladder of Citizen Participation framework, Consultation, Partnership, and Delegate Power, introduced by Sherry Arnstein (1969), were applied as a research theory framework to achieve the research objectives. The key factor of project success was stakeholder's inclusion in the beginning to the last stage of operation. In particular, the partnership concept in the form of joint committees shaped trust between stakeholders and facilitated their sense of ownership for long term project responsibility.

The PAR process of stakeholders in a housing development plan at Bungkan was shown to be better than a traditional, top-down bureaucratic planning approach, as a result of the greater number of participants and structural change of the planning process. A large number of participants in the PAR process can result in a more comprehensive and diverse perspective from different participants. The traditional approach mainly depends on a small group of professional and government planners. PAR allows local stakeholders to initiate the planning process from the perspective of their needs, problems and demands. This grassroots information can ensure that their goals could be met better than the top-down planning approach.

The study found that real practice is the most efficient way to convince and to gather different groups of stakeholders in the project. Without learning from action, PAR cannot be fully implemented in the planning process.

The challenges of implementing the study approach include that it is time consuming to develop trust between different groups of stakeholders and also between the research team, and outside people because each stakeholder has their own agenda and goals which easily introduce conflict of interest and distrust at the early stage of PAR. Furthermore, the empowerment process for stakeholders to understand the concept of PAR and housing planning are very time consuming because those two concepts are unfamiliar and new ideas for the participants. Researchers have to apply the concept to practice and different approaches need to be customized according to the needs, background knowledge, and communication with local stakeholders. In this study we found that face to face meetings and exposure to real practices through excursions, field surveys, and case studies were effective for stakeholder buy-in to the participatory planning process.

For recommendations, the research team proposed some measures in driving the city housing plans and projects under five strategies in an effort to move towards concrete implementation. To begin with, we recommend the establishment of a committee/subcommittee of provincial housing development to carry on, following and evaluating the master plan and project implementations in the long term. The Bungkan Governor

provincial administration offices should accommodate the Housing Development and Informal Settlement Prevention Plan in the Bungkan Provincial Strategic Plan or develop an agenda to ensure these projects will be implemented in the near future. The next suggestion is The National Housing Authority (NHA) and Bungkan province should develop a follow up and evaluation system of the plan, the project, and also the concerned organizations to enhance integration of housing development with city and environmental development. Moreover, the follow up and evaluation process will empower concerned authorities through capacity development. Lastly, the geospatial database and GIS applications for Bungkan province must be expanded to include additional information for housing development, for example, to consider land ownership, updated building and land use information, characteristics of renters, information on house renting entrepreneurs such as dormitory, apartment and single house, and assessment of locations for future development. These digital applications are consistent with Thailand 4.0 objectives, smart city planning, and more efficient, informed, and effective decision-making for community development.

Author Contributions

Conceptualization, Kitapatr Dhabhalabutr (K.D.); Methodology, K.D.; Software, K.D.; Validation, K.D.; Format analysis, K.D.; Investigation, K.D.; Resource, K.D.; Data curation, K.D.; Writing-original draft preparation, K.D.; Writing-review and editing, , K.D.; Visualization, K.D.; Supervision, K.D.; Project administration, , K.D.; Funding acquisition, K.D.; An authors has read and agreed to published version of the manuscript.

Endnotes

- ¹ Tambon is a government organization at the local scale and it could compared to a sub-district.
- ² The change resulted in shifting mandate, with a target of transferring 245 activities to local government agencies, for example, budget, manpower, and particularly decision-making power. Local government thereby acquired greater responsibility and roles in urban and housing development, with their own policies on administration, governing, and finance management.
- ³ Please look at the link for the most recent paper on Ladder of Participation: Building “A Ladder of Citizen Participation”: Sherry Arnstein, Citizen Participation, and Model Cities. June 2019. *Journal of the American Planning Association* 85(5):1-14. DOI:10.1080/01944363.2019.1612267). Please revise to include the author: Gaber, J. (2019). Building “A Ladder of Citizen Participation” Sherry Arnstein, Citizen Participation, and Model Cities. *Journal of the American Planning Association*, 85(3), 188-201.

References

- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216.
- Bungkan Administration Office. (2013). *Bungkan Provincial Development Plan 4 Years (2014-2017)*.
- Dhabhalabutr, K. (2020). Community participation in architectural design and planning as a method for heritage site conservation and development case study: Nong Kud Thing, Bungkan Province, Thailand. In E. Banissi et al., (Eds.). *2020 24th International Conference Information Visualisation (IV)* (pp. 599-602). IEEE.
- Dhabhalabutr, K., Benjaranonda, M., & Tantivess, N. (2015). *Housing development and informal settlement prevention plan of Bungkan City, Thailand*. National Housing Authority of Thailand.

- Fürst, D. (2018). Planung. ARL (Hg.): *Handwörterbuch der Stadt- und Raumentwicklung, Hannover*: 1711–1719.
- Guaraldo Choguill, M.B. (1996). A ladder of community participation for underdeveloped countries. *Habitat International*, 20(3), 431-444.
- Nabangchang, O., Jarungrattanapong, R., Leangcharoen, R., & Pipitsombat, N. (2016). *BIOFIN Thailand's policy and institution review: Wetland ecosystem*. BIOFIN.
- National Economic and Social Development Board, Office of the Prime Minister. (2012). *The Eleventh National Economic and Social Development Plan (2012-2016)*. NESDB.
- Pløger, John. 2004. *Strife: Urban Planning and Agonism in Contemporary Movements in Planning Theory*. Volume 3, Issue 1. Routledge. pp. 71-92
- Samuel, P. (1986). Community participation in development project: The World Bank experience. In M. Bamberger (Ed.), *Community Participation*, (Vol. 1, pp.46). The Economic Development Institute of the World Bank.
- Sanoff, H. (2000). *Community participation methods in design and planning*. John Wiley & Sons.
- World Wide Fund Thailand. (2008). *The project report of Ramsar site management with community participation*.