Manual for Organized Self-Help Housing Project in Thailand
Small-Scale Self-Help Housing in Khon Kaen Municipality, Thailand
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Introduction

Problem

Khon Kaen, Thailand, is the 5th largest city of the country. It was set up more than 200 years ago. This is a long history for the settlement of Khon Kaen or other words-Khon Kaen Municipality. Several movements took place concerning the peoples' settlement. The total area of Khon Kaen increased from 14 square kilometers to 46 square kilometers in 1971. The number of communities also increased from 47 in 1997 to 62 in 2000. These communities are comprised of communities organized by government office according to policy and structure of the Ministry of Interior. The second, non-government organization supported communities in term of the problem identification and improvement of communities. The latter type of communities has high potential and can solve their own problems better than the communities set up by government office.

As regard urbanization, communities in Khon Kaen are divided into 3 groups.

1. Semi-urban communities
2. Urban communities
3. Spontaneous settlement communities

The causes of these spontaneous settlement communities in Khon Kaen are:

- The rapid growth of the city especially the immigration of villagers to the city.
- Unused land within the city especially private land owned by SRT (State railway of Thailand).
- Unlimited of municipality expansion according to the changing of society from agricultural to industrial.
- Needs for underpaid labor within the city as an essential part of the urban economic.

The consequences these communities have to face are:

- Low income, poor living condition, no basic infrastructure
- No accessibility to public services such as health care, school
- No home address and insecure tenure ship
- Financial problems due to lack of job opportunities and job skills (more than 30% of household earn less than 110 US per month)

Figure 1. One of informal settlement communities in Khon Kaen

It should be realized that in order to solve the social injustices, it is not the need to supply more and more physical housing. But it is rather the involvement of the residents themselves in the task of "community development" that offer them the opportunities to solve their own problems. A new approach
to the housing problem of informal settlement recognizes their skill and willingness to work though they are unfortunately, poor. The concept of building and improving one's own home, known as self-help housing, is extremely appealing in this situation. Therefore, it is clear that important considerations must be met before these creative potential activities can be effectively utilized to develop communities in which the construction of home and the living condition and community can be upgraded.

**Objective**

- Concentrate on how to create a good place for living by using available resources and given constraints. Also, it is an attempt to bring together human resources in the community and to help them improve their living conditions.
- To propose a plan to set up a prototype of small-scale self-help housing in urban area of Khon Kaen which can be adapted to various conditions in rural also.
- A guideline manual for NGOs, Municipality and an education resource

**Expected Outcome**

- The community was given the opportunity to solve some of their problems and to strengthen their potential.
- Policy to include the poor and informal settlements as a part of city development process.
- Collaboration between local government, municipality, private sector and community groups.
- Public focus on the problems of urbanization and especially the urban poor

**Method**

This document was written mainly based on the experience of urbanization problem in Thailand. The basic material is supplemented by reviews of the literature, interview and field study. It composed with 2 sections. The first section focuses on the propose plan of small-scale self-help housing project in Khon Kaen Municipality, Thailand. The second section is the continuing of the first one but target on the general consideration of architect and planner in low-income housing design and planning.

**Target Area**

Target areas are spontaneous settlement communities in Khon Kaen. There are 4 characters of target communities, varied from each other in various aspects.

1. **Non Nong Wat Community**

   Residential can earn their own living through planting vegetable and rice which is related to their background and skill since communities has public land and located closed to their communities. Also, there are several projects that support communities to carry out occupational activities which are different from other squatter communities. Furthermore, the uncertain occupations of communities make them have more chance to carry out various activities supported by several organizations.

2. **Mittapab Community**

   Formal group-gathering has not been found to carry cut any development activities. There is only small group of relatives taking care of each other. This situation is due to the community residents' struggle to earn their own living with various occupations and different working hours. As a result, they have no time to discuss among themselves how to develop their communities though there are several people interested to do so.

![Figure 3. Map of Target area for proposed organized small-scale self-help housing project (OSH): Non Nong Wat Community](image)

3. **Non Tan Community**

   It is one of the oldest communities existing in Khon Kaen Municipality. This community has been
classified as semi-urban community since they still have strong kinship-tied and traditional behavior such as the respect toward the old as well as good relationship and friendly toward neighbors. They have to struggle for their shelters as well as their certain occupations. As a result, they can not have strong a community organization for lack of unity and participation.

4. Sam Liam Community

It is a new settlement community with residential in various economic status. The community’s members have different needs and potentials in solving their problems. There are also several types of houses existing in the community: single house, condominium, rented house, and apartment. Compared to the 3 communities earlier mentioned, this type of community shows highest housing variations. Consequently, the community members’ participation has different levels depending on households potential problem and needs.

In order to set up a self-help housing project in Khon Kaen which has never been introduced before to the city, spontaneous settlement communities are the target groups. Therefore, the first project should start from a small scale project, in order to utilize all the possible resources effectively. The project should be done in one of these communities.

From the study and analysis earlier mentioned, Non Nong Wat community should be the location of the prototype project due to its potential.

Solution

- strengthening community organization
- vocational programs
- leasing land from SRT
- form income generating by NGOs
- provision of temporary home address
- temporary consent from SRT to live on the land

General Consideration for Self-Help Project in Khon Kaen

By analyzing important aspects of self-help housing project in Khon Kaen, it should include legal aspects especially land ownership that belong to SRT, affordable cost of construction, technical quality and suitability for community capacity, construction time due to residents, uncertain working hour, social and economic development and gender awareness. Thai women play a major role in taking responsibilities but have less chances compared to men when decision are made.

Another basic information before starting the project is cultural background. Looking back to the old generation of Thai society, the concept of self-help housing used to exist. People in rural area participated to construct (mutual help) their neighbors or relatives’ houses without pay. The owner only prepared for the food. Since the society has changed by Western culture, this tradition also has been forgotten.

But, if we define organized self-help housing concept as a facilitating organization that both assists the households that have been chosen self-help housing and that bear a responsibility to authorities and financial aspect, this concept is totally brand-new for Thai society.

The main consideration in this case will be how to gain community fully understanding the process of self help housing idea.

A Self-Help Housing Project: Step by Step

- Initial Contact

Objective: To bring together the families in selected community and facilitating organizations, which are NGOs and the municipality to get to know each other and to improve the relationship between community and municipality. The organizations should communicate their clear goal in order to ensure the community that the project will not be involved with some issue such as politic when politicians take advantages from this type of community.

The expected outcome for the families is to gain full understanding of the whole process of self-help housing project, which may not occur in their first meeting. In this case, personal contact between the community leader and organizations, must be well founded.

At the end of this process: The facilitating organizations have to be ensure that the families understand the concept of self-help housing in
decision making, responsibility, coordination, construction and ready to participate in the next step of its process. The families also have to understand the role of facilitating organization in providing advice, support and training and service cost.

![Image](image1.jpg)

**Figure 3. To start and to improve relationship between community and outsider is the first action should be done before introduce organized self-help help housing concept to community.**

Place: Condominio Corazon De Maria Project, Costa Rica

- **Preliminary Study**

  **Objective:** To understand the families' needs and expectations, resources in community, level of organization and labor, possibilities for credit and subsidies for the project, possible problems in communities and the best resolution. This information can be obtained by site survey, observation and interview with families who are interested to participate and also the community leader.

  The facilitating organization also have to study the condition of land ownership, urgent needs such as physical condition of the land and feasibility of basic infrastructure like running water, electricity, public transportation. *(The municipality is to encourage the community to negotiate with the STR in order to rent the land and then the city can provide basic infrastructure such as road, electricity, and sewage.)*

  **At the end of the process:** There should be a starting number of families who decided to be involved in the project.

![Image](image2.jpg)

**Figure 4. In primary stage, the study of families’ need and their potentials must be done clearly, and carefully**

**Place:** A village - 14 kilometers from San Jose, Costa Rica

- **Feasibility Study**

  **Objective:** This process aims to go further with more details. It will be useful for the facilitating organization to decide whether to develop an organized self-help housing project in the given conditions, or not.

  Families should understand the scope of the project concerning the following:

  - **Legally**--The families now should be secure with land tenure. The negotiation between the landlord and the community should be set up. The role of facilitating organization can be flexible as a coordinator or in some cases, a financial guarantor to strengthen confidence to the landlord on the ability of the families to pay for the rent.

  - **Financially**--The families know the estimate cost of housing and community upgrading, monthly payment, the possibilities for them to afford and alternative sources for the loan or subsidy. The facilitating organizations must also know the socio-economic conditions of the participating families.

  - **Environmentally**--The community share expectations from the project in the meeting in terms of infrastructure improvement, environmental impact of the project, desire for the size of the house in consideration of the sizes of their families and their resources. The facilitating organization will use these information to adjust these expectations with available resources they can provide.

  - **Technically**--The facilitating organization have to compare different approaches to feasible, durable and affordable housing project to the families.
● **Socially**—members of community have to ensure that there is no major problem such as conflict in community and outsider to cause a delay of project. Community has willingness to participate in constructing their neighbor’s houses.

![Image](image1.png)

Figure 5. At the end of feasibility study stage, the participating families should understand what they will have to give to the project and what they will get in return.

**Place:** Condominio Corazon De Maria Project, Costa Rica

**Construction Period:** August 2002- May 2003

*At the end of the process:* The families should understand the design of the project and level of the finished house, the contribution of working time they have to provide, resources to be used and payment after construction. Also the detailed contract has been signed between the community and the facilitating organization to design the project.

- **Design**

  **Objective:** To develop appropriate, affordable housing and a good environment for community.

  The factors that must be considered at this stage are:

  - **Legally**—The project has to obtain and approval from the landlord (SRT) before going to the next stage.
  
  - **Financially**—The facilitating organization can provide the information of construction cost, cash flow, income sources, modes of payment and grace period, and the financial burdens to the participants.

  - **Environmental**—The architect and planner must advise and consult the families through the whole process of design, both of the site plan and their own house. This is important to ensure high motivation during implementation of the project and to assist maintenance such as main service, refuse, and waste disposal and others. The architect also has to realize the appropriate site plan according to climate, topography and surrounding environment. Another consideration for architect includes economical land use and infrastructure, security and a sense of pleasant community.

  - **Technically**—The technical team work in planning the infrastructure, the selection of building technology, levels of finishes, materials to be used, the most effective way of using communal resources, the need for training throughout the construction process, and the specialized labor available with the group itself. It is necessary to know good suppliers, the efficient way to purchase and store materials, how to control the budget and to inform the families about them.

![Image](image2.png)

Figure 6. Appropriate technology for one project not always mean the same for another.

**Place:** El Mirador Project, Costa Rica

- **Socially**—In this stage, group or organization must be formed to take responsibility for different division of tasks such as construction, welfare, warehouse management, accounting, security and so on.

*At the end of the process:* The pre-construction final decisions are made by community. The consequences of different solution shown by facilitating organization to ensure the best solution to the housing problem.

- **Implementation**

  **Objective:** To ensure that the construction quality should be comparable to professional built house and at the same time achieve efficiency community development.

  Before beginning construction process, all the legal document such as land, financial resource, building permit and related official approval must be done. The families have to sign the required contract with the facilitating organization.
From the study, Non Nong wat community’s character still tie together as they came from agricultural background and some of the residents has construction skill such as carpenters. Due to the pattern of living, most community’s member has uncertain jobs such as garbage collectors, unskilled labor and street side merchants. Delay in construction time table will happen unless efficient project planning management based on the practical condition of community can be provided. The availability of materials may not be a main concern as it can be produced in their communities. With the municipality’s project, they have the skill and the training of making cement block and cement roof as main construction material.

Figure 7. In many self-help housings, project, women play important role equally to men and in some cases even greater.
Place: El Mirador Project, Costa Rica
Construction Period: May, 2002-March 2003

There are 4 major areas that involved in this process.

- **Social**: Due to long construction process, the community should set up recreation activities to help create a sense of success and achievement among member of community.

- **Construction**: Quality control checklist, monitoring plans and schedules for community participation and work progress can be done by community themselves.

- **Administration**: Organized warehouse, distribution of building material, tool providing and control of expenses.

- **Financial activities**: cash flow control and monitoring the budget against the expenses and the progress of the work.

**At the end of the process**: The families should participate directly, through good distribution of labor and appropriate training in all the stages of the work process.

- **Transition**

  **Objective**: To allow the community to become independent of the facilitation organization.

  Delays are common in organized self-help housing and even general construction project. But one of the main objectives of the self-help housing project is to develop the ability of community to solve its own problem. The solution to deal with the various problems under different circumstances. As long as the community can still keep the progress moving, it becomes more independent of the facilitating organization.

Figure 8. One of the finished houses
Place: Aquitava Project, Costa Rica

The evaluation of the project should be done after the end of construction process which will benefit to future activities in community.

**At the end of the process**: The consequent after the development of the project should improve the social and economic development of the community. Also the project should improve the quality of gender awareness when families work together.

Figure 9. The outcome of self-help housing project is not a house but a process in order to build strong community.
Place: Aquitava Project, Costa Rica
Construction Period: Infrastructure/April-Oct.1999
Building/June-Nov.2000 (6 months)
## Case Study: Non Nong Wat Community, Khon Kaen Municipality, Thailand

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<tr>
<th>Process</th>
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<th>Actor</th>
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<th>Expect Outcome</th>
<th>Time/Period Place</th>
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<tbody>
<tr>
<td><strong>Initial Contact</strong></td>
<td>* to get to know each other &lt;br&gt; * to promote the concept of self-help housing &lt;br&gt; * to observe the possibility to start the project</td>
<td>* the families (60-70 families expected) &lt;br&gt; * facilitating Org (NGOs, Muni, uni, private sectors)</td>
<td>*general meeting &lt;br&gt; *health care service (optional)</td>
<td>*organized self-help housing concept has been introduced &lt;br&gt; *community have chance to express their problem &lt;br&gt; *start &amp; improve relationship between community and outsider</td>
<td>flexible time: evening, holiday weekend &lt;br&gt; frequency: 1-3 &lt;br&gt; length: 1.5-3 hrs.</td>
<td>* uncertain working hour &lt;br&gt; * no interest &lt;br&gt; * misunderstanding in the project</td>
<td>* promotion campaign &lt;br&gt; * initial contact with community leader &lt;br&gt; * recreation activities and public services (optional)</td>
</tr>
<tr>
<td><strong>Preliminary Study</strong></td>
<td>* to understand the community needs and expectation &lt;br&gt; * to build confidence with community &lt;br&gt; * to have a starting number of participating families</td>
<td>* facilitating Org staff &lt;br&gt; * participating family (less than 60 families)</td>
<td>* site survey &lt;br&gt; * household interview &lt;br&gt; * meeting with community &lt;br&gt; * observation</td>
<td>* informations of community’s infrastructure, site condition, ownership, physical condition, families need and expectation &lt;br&gt; * information for organization: condition of community</td>
<td>as soon as possible (2-4 weeks)</td>
<td>* Land Ownership (SRT) &lt;br&gt; * lack of participation from families &lt;br&gt; * incorrect data</td>
<td>* revise obtained data</td>
</tr>
<tr>
<td><strong>Feasibility Study</strong></td>
<td>* more detailed in possible problems &lt;br&gt; * household expectation adjust to available resources</td>
<td>* facilitating Org staff &lt;br&gt; * participating families</td>
<td>* meeting with community / discuss with technical team &lt;br&gt; * negotiation with municipality, SRT</td>
<td>* the possibilities for community and household upgrading: land tenure (SRT), infrastructure, financial &lt;br&gt; * decide to go on?</td>
<td>(1-2 months)</td>
<td>Legal Conflict (Land) &lt;br&gt; high expectation, limited resources</td>
<td>* negotiation between community and SRT &lt;br&gt; * educate community</td>
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Organized Self-Help Housing: Step by Step
Case Study: Non Nong Wat Community, Khon Kaen Municipality, Thailand

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<td>Design</td>
<td>*produce professional work based on the need of community and available resources *prepare things before start to construct</td>
<td>*Org.Staff: architect planner *participating families</td>
<td>*discuss with the families and technical team *final decision - made by community</td>
<td>*Site Plan Lay Out *House Plan *Appropriate construction tech., material, cost, financial source, method *technical training</td>
<td>*(1-2 months)</td>
<td>*delay of the process due to legal, political issue and so on</td>
<td>*consult with the families *facilitating organization provide information, community made decisions</td>
</tr>
<tr>
<td>Implementation</td>
<td>*make sure all the papers were done *construction &amp; team work development</td>
<td>*Org.Staff: arch.&amp;eng. technical team *participating families</td>
<td>*working, solving problems *quality control *training &amp; learning *celebration</td>
<td>*finished on time &amp; good quality &amp; everyone happy *community development</td>
<td>*(4-6 months)</td>
<td>*conflict during the construction *schedule delay</td>
<td>*compromise *strong leadership *encouraging</td>
</tr>
<tr>
<td>Transition</td>
<td>*community becomes independent from external organization *time to evaluate the project</td>
<td>*Org.Staff: *participating families</td>
<td>*celebrate and rest *community evaluation</td>
<td>*social and economic development *gender awareness</td>
<td>*(after project finished)</td>
<td>*delay or unfinished *unsolve problem</td>
<td>*participation and contribution</td>
</tr>
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Part II
General Consideration for Architect and Planner in Self-Help Housing Project Design

Introduction

Many of the early masterpieces of architecture were designed by unknown architects. Later, the architect became more significant. The architect who conceptualizes a building becomes far more important than the craftsmen who built it, especially in today's technology innovation period which made craftsmen less necessary or noticeable.

However in dealing with self-help housing project, the main resource available is manpower. The architect's responsibility is to create a framework by which people build their own houses. In order to take into account the living quality of future residents in self-help housing project, the architect and planner in urban development should be considering many issues.

General View of Architect on Low-Income Housing

For many architects and planners, they tried not to get involved in any kind of low-income project. They are many reasons behind this attitude. Lack of interest - as they are not sensitive to the role as architects in the developing economies. How to challenge architect and planner to develop innovative and imaginative solution to the problem of urbanization? The answer may not be found in the near future.

Objective

The study and analysis aim to:

- Provide suggestion for architects and planners in the design of self-help housing project in the developing world.

- To alert architects and planner to be concerned with urban crisis in their own countries.

Methodology

The study is concerned about the social, planning, technical and the most important; architectural aspect in self-help housing project from personal experience in low-income housing study and design.

Social Aspect

- Besides design simple housing, architect should study community life as well as household life. The result of the study should reflect a strong philosophy about the motivation of people and their pattern of behavior.

- Consultation with the residents should be done throughout the planning process.

- Economic opportunities such as training center for the residents must be provide. The idea is that, it is not possible to solve problem without improving their lives through job opportunities.

Financial Aspect

- The cost of housing units must be economically feasible, in minimizing the cost of construction and possible subsidy.

Technical Aspect

- Architects and planners should utilize environmental techniques that are economically feasible, not beyond the capacity of community, minimize the cost of material and construction, and indicate the requisite parts of the unit to be built and the finishes to be applied as a bare minimum. Most system includes timber, concrete blocks, cement blocks or adobes as building materials. But some use precast concrete with fabricated systems. Anyway, local construction technique in each community should also be considered.

Planning and design Aspect

- Emphasis is not only on better housing, but also on site improving and social services
Figure 10. Proposed plot for Non Nong Wat Community

- In order to strengthen a community, planning should include the meeting place and circulation path, which would bring the residents together. But without good management, large public open space can turn into serious maintenance problems. Other concept is to subdivide the entire site into small lot and maintenance by each family.

- The planning should provide private garden to household.

- The site plan should be pedestrian-oriented which extends to public transportation such as bus or train.

- The subdivision of the site can be defined by the structural system of the house. Other concept can use the size and shape of the individual lots as the main element of order, but allowing for much diversity in the individual house designs. Other concept can use the road, paths and public open space as the element indicating the layout of the site and allow for greater diversity in the individual lot size.

- In intermediate and large scale self-help housing project, professional training centers, building material warehouse, common vegetable gardens and educational centers can be used to further interactions among members of the community. These space or buildings should be located close to the user's home in order to reduce the time and cost of commuting.

- The architect and planner should be aware of environment control in the community such as waste water which can be made simple and inexpensive. In the long run, the use of sun and wind as an energy supply can be more useful. Limitation on the number of vehicles must be considered.

- Housing design should be simple that can be done well by residents that may have time to do construction work only on the weekends or holidays.

- The shape and appearance of the house after transition stage might change from time to time, as resident build and improve their own houses, according to their resource. The architect should leave suggestion for future improvement or upgrading of the community at large.

- The culture and climate should be major considerations. In a tropical climate, the relationship between the inside and outside space or the first floor and space below at ground level is considered very important, especially when the house is small. Many daily activities of family and community take place outdoors. So the extension of space to outdoor (such as porch, patio) or to space below should be considered. In many developing countries, the residents keep pigs and chickens in the house or space below for their addition income.

Figure 11. Proposed housing design consideration

- The design should provide a quality cross ventilation.

- In order to avoid the problem from flooding or any natural disaster, intensive site analysis should be done before design stage. The heights of ground level in those projects using adobe as a construction material have to be primary concern.

- Tradition household scheme in self-help housing project compares to individual household unit may not be serious concern as long as the designs reach the resident's requirements.

Conclusion

The suggestion in this study is not cover all the rules for architects and planners when doing self-help
housing design. It is a starting model for those who are interested in improving the living condition of the poor and especially their community in order to obtain what we called sustainable development in any regions of the world. Positively, there will be further more considerations the architects and planners have to invent and or experiment with each project environments and circumstances.

Reference:


