Thai Incremental Housing Experience

Wijitbusaba Ann Marome, Ph.D.
Supreedee Rittironk, Ph.D.

Faculty of Architecture and Planning, Thammasat University
Bangkok, Thailand
Contents:

1) Bangkok Urban Growth and Low-income Settlements  page 1-5
2) Survey Case Studies  6
3) Three types of Incremental Housing
   3.1) Site-and-Service  7-11
   3.2) Slum Upgrading and Squatter Settlements  11-17
   3.3) Independent Progressively Expanded Housing  18-23
4) Composite Chart  24-25
5) Applicability  26
6) References  27
Bangkok Urban Growth and Low-income Settlements

Bangkok, the capital of Thailand since 1782, marked the beginning of the current Chakkri Dynasty. Nowadays, Bangkok covers an area of 1,443.85 square kilometres. According to the National Statistics Office (NSO) in 2008\(^1\), Bangkok's total population was 5,710,883 (2,988,570 are women and 2,722,313 are men) with 2,207,453 households. Between 1883 and 1913, Bangkok’s population expanded from 169,000 to over 365,000 people, a growth rate far in excess of the average population growth in the Kingdom. By 1937, Bangkok was 15 times larger than the second-largest urban settlement of Thailand, Chiang Mai (Askew, 2002: 37). Bangkok remains disproportionately larger than Chiang Mai and as a result, Bangkok has manifested more dominant and exaggerated elements in economy, society and culture compared to other urban areas in Thailand (Baker and Phongpaichit, 2005: 204). The urbanisation of Thailand, especially Bangkok, can be explored through its economic boom.

The industrialisation of Thailand during the 1980s was not only an economic phenomenon; it also included social and demographic transformations. For example, with respect to health, the country’s death rate was in steady decline to 6.4 deaths per 1,000 persons in 1985. The fertility rate declined sharply since the 1960s as a result of birth control campaigns, rising prosperity and delayed child-bearing for education and career. Hence, the Thai population decreased from about 5 to 3.7 persons per household (according to National Statistics, 2005) between 1987 and 2005, whereas the number of families increased (ibid: 201; Hewison, 1996: 149). Such industrialisation and demographic transformation have provided for a positive picture of Thailand’s development. Between 1947 and 1980, the official number of municipal areas was only 1.7 percent. By 1986, there had been a 5.9 percent increase. This increasing urbanisation resulted in a decrease of designated rural areas to only 30-40 percent in 2005 (ibid: 149). In addition, the GDP per head tripled from the 1980s (20,000 Baht) to the 2000s (by almost 60,000 Baht) (Baker and Phongpaichit, 2005: 201). Nevertheless, the focus of development in Thailand on urbanisation has an implication for an increasing disparity between the urban and the rural areas. In this respect, most of the positive pictures in terms of the benefits of industrial development have been mainly concentrated in Bangkok (Marome, 2009).

Bangkok’s demographic change is part and parcel of the rise of urbanism in Bangkok. It has been usually estimated that about 15 percent of Thailand’s population resides in the greater Bangkok metropolitan area (Hewison, 1996: 149). The Table below shows population trends in Bangkok from 1985 to 2006 relative to those in Thailand as a whole.

\(^{1}\) In comparison to the whole Kingdom, in 2008, Thailand had a population of 63,389,730 (32,133,861 are women, whereas 31,255,869 were men)

http://www.dopa.go.th/xstat/p5010_01.html, 29.01.09, 14.15
Table 1: Demographic changes of the population in Bangkok and Thailand as a whole, 1985-1986, 1995-1996, and 2005-2006

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Birth rate*</td>
<td>Death rate</td>
<td>Growth rate</td>
<td>Birth rate</td>
</tr>
<tr>
<td>Thailand</td>
<td>23.87</td>
<td>6.44</td>
<td>1.74</td>
<td>17.90</td>
</tr>
<tr>
<td>Bangkok</td>
<td>18.92</td>
<td>3.84</td>
<td>1.51</td>
<td>14.24</td>
</tr>
</tbody>
</table>

*Note: Birth and death rates represent figures per 1,000 persons while growth rates represent figures per 100 persons.

Source: adapted from the National Statistics Office, 2008 and the Institute of Population Studies, Chulalongkorn University, 2007

Even though the death rate has been slightly increasing (from 3.84 deaths in 1985 to 4.23 deaths per 1,000 persons in 2005), the birth rate in Bangkok has been declining since 1985 to 2005 (18.92 deaths per to 8.63 deaths per 1,000). It is also interesting to see that the death rate of Bangkok has been much lower than that of the whole kingdom, whereas the growth rates have been similar. According to the Institute of Populations Studies in 2006, the population density in Bangkok has also increased from 3,560 persons per square kilometres in 1995 (5,584,963 persons) to 3,631 persons per square kilometres in 2005 (5,695,956 persons), whereas the population density of the whole kingdom only increased from 117 persons per square kilometres in 1985 to 122 persons per square kilometres in 2005.

However, the above population numbers are still considered to be quite low. The urbanisation of Bangkok and the currently available data are likely to be underestimated. This is partly because the way data was collected, based on household registrations². Even so, the increasing number of Bangkok’s population can not be ignored (ibid: 149).

The increasing population in Bangkok can also be further explored from the angle of urban migration. Government policy has been encouraging foreign investment and industrial development through taxation and the provision of cheap labour. Since the decline of the agricultural section in the rural areas, the returns from agricultural production was too small for household reproduction, and the money from Bangkok became a necessity for the reproduction of rural villages. At the same time, government policy ensured that the surplus labour from the agricultural sector would be absorbed into the industrial one. Hence, female and male workers migrated in search of wage-work in Bangkok (Korff, 1989: 16).

² A household registration is an official household census where the address, location and ownership information of a house, including the name and relationships of all members of that household are officially listed. (www.dopa.go.th 30.03.09 10.00)
Table 2: Number of migrants (X 1,000) moving to Bangkok (from regions of origin, 1974-1992)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North-eastern</td>
<td>24.6</td>
<td>24.9</td>
<td>44.3</td>
<td>53.2</td>
<td>36.4</td>
<td>48.6</td>
<td>155.5</td>
</tr>
<tr>
<td>North</td>
<td>7.7</td>
<td>7.4</td>
<td>10.3</td>
<td>17.0</td>
<td>14.7</td>
<td>19.6</td>
<td>68.6</td>
</tr>
<tr>
<td>South</td>
<td>4.9</td>
<td>6.7</td>
<td>6.3</td>
<td>10.0</td>
<td>9.0</td>
<td>7.8</td>
<td>18.3</td>
</tr>
<tr>
<td>Central</td>
<td>32.8</td>
<td>28.2</td>
<td>32.3</td>
<td>41.8</td>
<td>33.6</td>
<td>32.8</td>
<td>60.2</td>
</tr>
<tr>
<td>Total</td>
<td>70.6</td>
<td>67.7</td>
<td>93.8</td>
<td>122.9</td>
<td>94.0</td>
<td>108.8</td>
<td>302.6</td>
</tr>
<tr>
<td>Male</td>
<td>35.9</td>
<td>31.7</td>
<td>38.9</td>
<td>48.6</td>
<td>39.1</td>
<td>41.4</td>
<td>152.9</td>
</tr>
<tr>
<td>Female</td>
<td>34.8</td>
<td>36.0</td>
<td>55.8</td>
<td>74.2</td>
<td>54.8</td>
<td>68.3</td>
<td>149.7</td>
</tr>
<tr>
<td>M:F</td>
<td>1.03</td>
<td>0.88</td>
<td>0.68</td>
<td>0.65</td>
<td>0.71</td>
<td>0.61</td>
<td>1.02</td>
</tr>
</tbody>
</table>


The number of female and male migrants moving from different regions of the country to Bangkok increased from 70,600 persons in 1974 to 302,600 persons in 1992. The largest portion came from the poorest region, the North-eastern region. Moreover, the trend of female migrants outnumbering male migrants continued until the early 1990s. In 1992, more women (64,300 women) at the young age of 10-19 years migrated to Bangkok compared to men (47,700 men). However, at the older age range of 20-34, more men (72,400) migrated to Bangkok compared to women (57,500 women). In sum, female migrants comprised about 4.7% of Bangkok’s population, whereas male migrants comprised at 4.9%. As previously discussed, female migrant workers were mostly employed in services and sales. Male migrant workers were employed in the technical and transportation fields (Tantiwiramanond and Pandey: 103-104). As a consequence of government policy being focused on urbanisation, the disparity of Thailand’s productivity between the urban areas, especially Bangkok, and the rural areas is apparent, as shown in the Table below.

Table 3: Regional productivity of Thailand in 1989

<table>
<thead>
<tr>
<th>Region</th>
<th>% of population</th>
<th>% of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok</td>
<td>16.0</td>
<td>48.2</td>
</tr>
<tr>
<td>Central</td>
<td>16.8</td>
<td>18.4</td>
</tr>
<tr>
<td>Northeast</td>
<td>34.6</td>
<td>12.9</td>
</tr>
<tr>
<td>North</td>
<td>19.4</td>
<td>11.4</td>
</tr>
<tr>
<td>South</td>
<td>13.2</td>
<td>9.1</td>
</tr>
</tbody>
</table>

Source: The Thailand Development Research Institute, 1992 (adapted from Hewison, 1996: 147)
Bangkok, in 1990, only had a share of 16% of the whole population; however, it contributed to almost half of GDP in Thailand (48.2%). On the contrary, the population of the North-eastern part of Thailand, which is considered the poorest part of Thailand, comprised about 35% of the whole population contributed share of about 13% of GDP only. This Table suggests that the concentration of income and wealth distribution in Bangkok reflected uneven development between Bangkok and other parts of Thailand. Korff (1989) also argues that large business groups and foreign companies tended to concentrate in Bangkok not only because it was an economic centre but also because it was the political centre as well. Hence, the argument posited not only that urban economic development is more rapid than that of rural areas, but that big business is also only possible in Bangkok (Korff, 1989: 13-14).

Such industrialisation also contributed to the rising middle class in Bangkok. The middle class continued to be the main beneficiary of this income and wealth concentration in Bangkok. The Table below presents the socioeconomic status of the population in Thailand in different regions in 1990.

Table 4: Socioeconomic status (SES) in Thailand, 1990

<table>
<thead>
<tr>
<th>SES^3</th>
<th>Bangkok (%)</th>
<th>Other urban areas (%)</th>
<th>Rural areas (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>55.1</td>
<td>69.6</td>
<td>78.6</td>
</tr>
<tr>
<td>Middle</td>
<td>28.3</td>
<td>20.5</td>
<td>13.1</td>
</tr>
<tr>
<td>Upper</td>
<td>16.6</td>
<td>9.9</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: Ogilvy & Mather, 1991 (adapted from Hewison, 1996: 150)

Urban dwellers have received the greatest benefits as a result of the increasing wealth of the upper and middle classes in the urban area, especially in Bangkok, which amounted to about double of that in the rural areas. Almost half of Bangkok’s income earners are considered to belong to the middle or higher classes. (Marome, 2009)

With respect to the aforementioned uneven development between Bangkok and the rural areas, it is apparent that Bangkok provided a variety of jobs for the middle classes as well as cheap labour. Even so, social stratification in the rural areas was small compared to that of Bangkok, where the disparity between the urban rich and the urban poor could not be ignored. Bangkok was the place where the mass media, government departments, and business were located. As a result, Bangkok also had to deal with the heterogeneity and complexity of the working population in Bangkok (Korff, 1989: 16, 22).

^3 A relative measure of a person’s economic and social position against others, based on income, education and occupation. (www.nida.or.th)
The map above shows the slum settlement of urban poor in Bangkok. It is noted that the urbanization of Bangkok started in 1960s, and intensified in the 1980s, following the industrialization. (Marome, 2009) There are 65% of the Thailand’s population reside in the rural area, where as 35% are urbanite. Housing has been pressing issue for the urban poor. The development of urban housing for the low-income is as follows:

- Since, 1970s: construction flats and completed houses
- 1977-1980s: Site-and-Service
- 1977-2000s: Slum Upgrading by government

National Housing Authority was set up in 1973. However, housing is not generally responsibilities of Local Authority Settlement characteristics. There are still 5,500 low-income communities in 300 cities (8.25 million people) in Thailand. Amongst those who earn low-income, there are 3,700 people (almost 70% of low-income earners) who cannot afford housing in the market and public system and are not granted the right to the land tenure. This includes 445 communities who are threat of eviction. 65% of which rent land with no secure contact, and 35% squatted on common land.
2

Survey Case Studies

Environmental and service deficiencies are Thailand’s main urban housing problems, especially on environmental sanitation and pedestrian access. The National Housing Authority (NHA) is responsible for providing the house for low-income families. During the mid-1970s, NHA’s subsidized housing programme emphasized conventional apartment and detached and semi-detached units. (World Bank, 1980) Low-income housing and slum settlement in Bangkok can be traced its process profile based on survey of incremental housing. To provide a set of alternative characteristics of incremental housing in Bangkok, this research divided incremental housing into three types, depending on its term of housing initiation ranging from public to private-initiated. Hence land tenure security of each type is also varied, ranging from having land security to rental term.

Type 1: Site-and-Service
1: Tong Song Hong
2: Klong Jun

Type 2: Slum Upgrading
3: Klong Lum Noon
4: Bang Bua
5: Pra Cha Ruam Jai

Type 3: Independent Progressively Expanded Housing
6: Democracy Monument District
7: Yao Wa Rat District
8: Sukhumvit District
3
Three Types of Incremental Housing

Type 1
Site-and-Service

During 1976-1977, Site-and-Service and Slum Improvement Project were planned. This type is noted as state-initiated self-help housing. The project was planned as a pilot effort to demonstrate the technical and financial feasibility of unsubsidized sites and services projects and of slum improvement schemes as alternatives to conventional, higher cost approaches. During 1978, NHA emphasizes Site-and-Service development with core-housing, rather than a fully constructed unit. (World Bank, 1980) With regards to the land tenure, since the project is state initiated, people live security in the right of land.

Tung Song Hong Community

*Tung Song Hong* is the the first Bank-financed project which has generally been satisfactory. The project includes a sites and services development at Tung Song Hong with about 3,000 units, the 5 slum improvement projects, loans to small businesses and industries in project areas and technical assistance to NHA. NHA began marketing units in November 1979, and the first residential zone was expected to be ready for occupation at the end of 1980. Physical improvements in the slums were virtually complete at the end of 1979, with only minor delays. (ibid, 1980)
Below is the comparative view of all three levels of progressed houses. The picture suggests that, not only number of rooms increased, but also the construction material was improved, especially for the very-progressed house.

The floor plans of very-progressed house (type A) are shown below. The initial house was demolished and re-built to 2-story house. Hence, number of rooms increased from only one bedroom to 2 bedrooms, living room and a kitchen. Parking area is also built. In addition, the construction material of the progressed house is well improved, constructed with a durable quality.
The pictures on the left show the sections of a very progressed house. With respect to the household characteristic, the number of household member remains the same, 3 members in a single household. The household income is regarded as a higher income with more than 40,000 Baht/mo (1,250 USD). They wanted to expand because they had sufficient fund. They also wanted to improve quality and build a more secured home.

Klong Jun Community

The community was built in 1983. It locates in Bang Kapi district. There are 3 types of housing in this Site-and-Service project, the apartment building (high-rise building), townhouse, and detached house. The survey was done only for the progression of the townhouses since this type displayed well its process profile based on survey of incremental housing.
This is an example for the very progressed house. The expansion on the right side (2 metre for all 3 stories) of the house was the major progression, a total space of 69 square metre increased. This could be done because this house locates at the edge and connect to the main road. The progression includes 5 more rooms: 2 more bedrooms, a shop, and one more bathroom.
In addition, the expansion on the top roof is also progressed. With respect to the household characteristic, the number of household members slightly increased from 2 to 3 members. Household income is regarded as a higher income with more than 40,000 Baht/month (1,250 USD). The reason of the expansion and intensification of the space was to working at home. As shown in the sections above, the first floor is, then, used for the convenient store.

Type 2
Slum Upgrading

This type is noted as stated-supported self-help housing and collective effort of community. The first two selected case studies were funded by Community Organizations Development Institute (CODI) under the scheme of Ban MunKong. People, initially, require security in the right of land. CODI main mission is to support and assist community organizations and their networks in improving standard of living, income earning, housing and environment development both in urban and rural through integrated development process. It also provides financial support to community organizations and their networks. Slum upgrading was initiated in 1977. The programme is to improve and maintain existing community structure and people’s established life and add value of already existed investment. This also improves better environment and infrastructure conditions and its link with city. Subsequently, the programme aims to grant the right to land tenure such as re-blocking, land-sharing scheme. (CODI, 2009)
*Bang Bua Community*

*Bang Bua Community* is Bangkok’s first-ever case of public land being leased to a network of canal communities, under Treasury Department ownership. After the on-site reblocking programme, there are 398 houses. Tenure term is 30 year renewable lease to the Bang Bua community cooperative (CODI, 2008).
This set of floor plans and sections note the very progressed house. The house was mainly progressed vertically. The staircase and the second floor are the main expansions. Hence, the first floor was re-utilised to the living room. As for the household characteristic, the number of household member remains the same, 4 members. The household income is lower income of less than 20,000/month (625 USD). The fund for home improvement was partly supported by CODI.
Klong Lum Noon Community

The canal-side community of Klong Lum Noon locates in suburban Bangkok. In 1997, land owner decided to evict the community and develop the land for the commercial purpose. CODI provided about 11 millions Baht loan for the land loan and household loan and upgraded the squatter settlement under a land-sharing scheme. As a consequence, there are 49 residential units and the community cooperative is granted right to the land ownership.

Before

A: very progressed house

B: progressed house

C: hardly progressed

After

The canal-side community of Klong Lum Noon locates in suburban Bangkok. In 1997, land owner decided to evict the community and develop the land for the commercial purpose. CODI provided about 11 millions Baht loan for the land loan and household loan and upgraded the squatter settlement under a land-sharing scheme. As a consequence, there are 49 residential units and the community cooperative is granted right to the land ownership.
The expansion included 3 more rooms: one bedroom, one bathroom and one kitchen. The outdoor staircase was also expanded. In addition, the construction material was also improved. As for the household characteristic, the number of household members remains the same, 2 members in a single family. They are supported the fund for their home improvement from CODI, and that the repayment rate is 2,000 Baht/month (60 USD).


**Pra Cha Ruam Jai Community**

*Pra Cha Riuam Jai* community was established in 1985. Since 1985, the community occupies 8.44-Rai land (or 13,500 square metres) along the *Prame Pracha Kom* canal. The community was expanded from 101 residential units with about 400 residents in 1985 to 270 residential units with 1,800 residents in 2010. Unlike the previous two slum upgrading supported by CODI, this community organised the saving and the process of incremental housing themselves, under community cooperatives.
The effort of the community can be noted that their economic well-being is better than the previous two slums. Hence, they did not require state subsidisation. The set of floor plans and the sections above is an example of a very progressed house. The expansion includes 3 more rooms: 2 more living rooms and one bathroom. Again, one outdoor staircase was also added. As for the household characteristics, the number of household members remains the same, 8 members. However the expansion and intensification of the space was to accommodate extended household. Household income is less than 20,000 Baht/month (625 USD).
Type 3
Independent Progressively Expanded Housing

The economic developments of Thailand, urbanisation, and the changing socioeconomic characteristics of her cities have also led to uneven spatial development in Bangkok. (Marome, 2009) Soi-based ecology in central Bangkok is one of the products of uneven spatial development in Thailand. Askew argues that it is a system comprising the interrelations between the resources and population of an area and the distribution and mix of these elements. Soi-based ecology embeds the physical structure, economic base, and population of an area in inner Bangkok (Askew, 2002: 248-249). This is the starting point where the last type of incremental housing is occurred, in order to accommodate the urban poor. The last type of incremental housing is an independently progressively expanded housing. The house and the land are managed and owned by the private sector, mainly individual developer. The building type is initially a row-house and progressed vertically with a much higher number of bedrooms. The market is for rental, especially for the urban migrants. In addition, the location for this type is prominent around the major transportation hub in the inner Bangkok. This also gives a successful picture of the affordable and convenient for travel for the low-income.

**Yao Wa Rat District**

Before

![Progressed House](image1)

B: progressed house

C: hardly progressed

After

![Yao Wa Rat District](image2)
The above set of floor plans and sections give an example of the very progressed house. The main progression is vertically expanded as one more floor was added as the number of bedrooms increased from one to two bedrooms. Household member is increase from 3 to 4 persons.
Sukhumvit District

A: very progressed house

B: progressed house

C: hardly progressed

Year: 1990

1st FLOOR PLAN

2nd FLOOR PLAN

Year: 2010

1st FLOOR PLAN

2nd FLOOR PLAN

Global Consortium for Incremental Housing
Sukhumvit district locates in central business district of Bangkok. The above set of floor plans and sections give an example of the very progressed house. The space was particularly intensified and divided in numbers of bedroom for rent. Since the land use regulation of the district allows a higher building, the building was also expanded vertically. As a consequence, 18 more bedrooms were added (14 to 32 bedrooms) with the increased number of residents from 25 to 65 (approximately 4 persons per room). In addition, the number of bathroom was increased for sharing facility.
Democracy Monument District

Before
A: very progressed house
B: progressed house
C: hardly progressed

After

A: very progressed house
B: progressed house
C: hardly progressed

Year: 1980

Year: 2010
Democracy monument is the area for the transportation hub, for bus and sky-train. The above set of floor plans and sections give an example of the moderate progressed house or type B. The interesting point is that this house is expanded vertically. As a consequence, 2 more bedrooms were added.
4

Composite Charts

The following set of composite charts show the progressed profile of incremental housing in terms of household member increment, space increment and current household income. The data is increased numbers from all 2-3 communities, except that if the household income, with around 15 households of each type of incremental housing.

![Composite Charts](image)

Type 1: Site-and-Service

As shown in the above chart, the number of household members slightly increased for one to two persons, whereas the space increment is ranged from one to four more rooms, especially for bedrooms. An average household income is ranged from 20,000 (625 USD) to 50,000 Baht/month (1,560 USD). This suggests that the economic well-being of the family is improved as they could expand, intensify or even re-build (in some cases) their home in order to have more utilized space. It also may suggest that the core housing as part of the Site-and-Service program did not meet space/function demanded, even though the quality of the construction material is better than that of the slum settlement in Type 2. This is also supported by the resident’s satisfaction of the space increment. Most of them also intend to encourage their children to keep this house.
Type 2: Slum Upgrading

As would be expected for the lower income families, the number of household members is likely to increase more than the number of space increment. As they share rooms, one house is accommodated by many household members. The above chart shows that the number of member increment is ranged from one to five persons, whereas the number of space or room increment is only ranged from one to four rooms. The household income is lower, earning less than 30,000 Baht/month (930 USD). However, one cannot ignore that the major achievement of this type of incremental housing is the land tenure security, giving the state or collective community support.

Type 3: Independent Progressively Expanded Housing

Unlike the previous two types, the space increment is extremely high which also suggests the high space intensification. The number of household member is also increased as they also share rooms. However, the level of income is still low, the family earn only less than 20,000 Baht/moth (625 USD). As mentioned earlier, the housing is for rent and the residents are likely to work in a service sector.
5

Adaptability

There is no systematic study on the development of incremental housing in Thailand. Tracing pattern of the incrementally built should be done city-wide, concerning the different urban context. It is prominent in this research that housing stock has increased with the number of household members. Especially that of the last type, privately owned housing becomes the affordable housing choice for many urban migrants. This is also because such housing is likely to locate closely to their work place, hence saving their cost for travelling.

In this light, incremental housing should be:

- **systematically studied throughout a city**, concerning different level of housing intensification in terms of number of room progressed, number of household members increased, level of household income, process of land tenure security, budget used for incremental housing. A more in-depth interview in terms of household negotiation with regards to who has the major influence on improving one’s house is also important in order to understand the internal working of how incremental housing is built or even promoted.

- **integrated with the study on city-wide and nation-wide slum upgrading programme initiated by CODI’s ambition**. This will give richer information of to what extent low-income settlements affect or being affected to the city system/fabric as a whole. An integrated development planning and policy should also be studied with land use planning, understanding housing location in relation to other urban networks, and vice versa.

- **promoted more for rental market**. State should intervene and support the last type of incremental housing, not leaving it for the sake of private market. Not only state could operate income, but it also could control the preferably direction of urban growth, concerning the rental housing for many urban migrants (especially those in the service sectors). This could be an alternative choice for low-income housing, for example by investing on the refurbishment of the row-houses. The key is that the location of this type of incremental housing is more advantage than other types discussed earlier because of its location and a more flexible land use regulation, this type of housing could be expanded vertically yet complying to the land use regulation. However, it is also important to study its impact on a wider city scale noted above.
6

References


CODI, 2009 *A Presentation on Community Organizations Developments Institute*

CODI, 2008 *50 Community Upgrading Projects* A Publication of the Community Development Institute, Thailand, No. 5, March 2008


Korff, R. (1989) *Bangkok and Modernity* Chulalongkorn University, Social Research Institute


The Authors

**Dr. Marome** has a background in Architecture, International Relations and Development Planning. She has been working in development planning with experience in academic research, teaching and advisory service for NGO and government sector in urban development. Her work focuses on gender and socially just urban development. She also adopts social aspects, especially on gender equality, on spatial mobility and land-use planning. At Thammasat University, she is a lecturer in architecture and planning, and active in curriculum development and international partnerships for teaching and research. Previous assignments include climate change adaptation strategy and land-use planning for fishing community, gendered spatial mobility, co-production of housing, and old town’s sites and surrounding communities development.

**Dr. Rittironk** is an architect, a teacher, and a researcher. He received a Bachelor degree in Industrial Design from Chulalongkorn University in Thailand. He relocated to the United States to pursue his two master programs in Architecture and Construction management from Washington University in St.Louis. He practiced Architecture many years in St.Louis where he obtained his architect’s license. He is also a member of American Institute of Architects (AIA). He continued his doctoral study at College of Architecture, Illinois Institute of technology (IIT), and received Ph.D. in Architecture. His doctoral research is focused on building structure and structural materials in Architecture and Building structure. Dr. Rittironk is now in Thailand and is currently teaching at Faculty of Architecture and Planning of Thammasat University, Thailand, where he continues to do his research in structural architecture and else that are related to cultural issues in Thailand and within region.