



## Sustainable urban planning in Thailand: Infrastructure growth and pollution in Khon Kaen City

### Key Findings:

- **Rapid and often haphazard expansion of urban infrastructure in the Mekong Region's towns and cities is leading to health, cultural and environmental impacts.**
- **The growth of Khon Kaen city in northeastern Thailand has created both positive and negative impacts on its rural hinterlands.**
- **Urban problems extend beyond the urban areas to the peri-urban and rural hinterlands, as cities usually grow by extracting resources from rural areas for urban consumption and processing.**
- **Pollution of the suburbs is increasing as solid waste and effluents created in the urban areas are released or dumped into the surrounding hinterlands.**

### Rapid urbanization and concerns

The cities and towns in the Mekong Region are undergoing a burgeoning growth in infrastructure expansion including residential apartments and condominiums, commercial areas like large shopping malls, and the expansion of energy and transport systems especially roads and flyovers. At present 31 percent of the population in the Mekong Region are living in these urban areas.

But as the cities and towns spread outward to the suburbs, the urban expansion, however, remains both unplanned and haphazard, raising health and environmental concerns. Some of the concerns of this rapid and mainly unplanned urbanization extends beyond the urban areas to the peri-urban and rural hinterlands.

The growth of the cities usually takes place by extracting resources from the rural hinterlands for urban consumption and processing. The solid waste and pollution created in the urban areas are dumped in the surrounding hinterlands. These problems are continuing to escalate, particularly in medium and small sized cities that form the major characteristics of urban areas.

## **Khon Kaen city: Spreading outward to the hinterlands**

Recognizing the importance of analyzing the rapid urban expansion and its impacts, the SUMERNET partners from Khon Kaen University's Center for Research on Plurality in the Mekong Region, conducted a study to look at the issues of urban expansion on the hinterlands of Khon Kaen city in northeastern Thailand.

The research identified some of the major impacts and concerns of the inhabitants in Khon Kaen's hinterlands. The study found that the expansion of Khon Kaen city, although providing benefits to its urban population through expanded housing, shops, roads and other services, had created many negative impacts on its rural hinterlands.

### ***1. Loss of agricultural land to speculators and infrastructure expansion***

Farmers are selling their agricultural lands to land speculators, developers and others from the city; the lands are then used for building houses, apartments, shopping centers, transport area such as bus terminals, etc. After selling their lands, the farmers usually take up wage labour or other work, or move on to buy land further away from the expanding city.

### ***2. Lack of proper management of solid waste***

Khon Kaen city's solid waste is collected and dumped without either treatment or proper management on a piece of rural land in the northern suburb of the city. Although a small solid waste recycling project has recently been initiated, this is unable to deal with the large daily amount of urban waste. In addition, the improper management of infectious waste and the waste from construction projects in the city have been posing health problems for the nearby residents.

### ***3. Effects of infrastructure growth***

Sometime the expansion of transport infrastructure such as the bypass road creates problems to other hinterland communities by blocking waterways used for farming, transport or small-scale fishing. This has resulted, particularly during heavy monsoonal rains, in the repeated flooding of communities and paddy fields in the eastern part of Khon Kaen city.

#### 4. *Loss of cultural values*

As the city spreads outwards, it is also having a significant influence on the socio-cultural values and way of life of the hinterland communities. The parents express concerns about the changes in lifestyle and behavior of their children as well as the increased incidence of crime and spread of drugs in the surrounding villages.

#### 5. *Administrative gaps*

For managing the urban areas, the local administrative system for Khon Kaen province is divided into smaller administrative zones such as city and sub-district municipalities. However, the expanding impacts from Khon Kaen's urbanization have surpassed the capacity of the city municipality and its administrative zones to deal with these impacts.

### **Policy recommendations**

- Establish a Regional Planning Committee for Khon Kaen. This can include members who are representatives of related offices and sectors such as Khon Kaen city municipality; surrounding sub-district municipalities; Provincial Administration Organization (PAO); experts on city planning, city and rural community development; and civil society representatives. Also, the Khon Kaen Provincial Governor or Chairman of Khon Kaen Administration Organization may be appointed as the Committee's Chairperson.
- Establish a land use plan. This can help deal with the city's problems that extend beyond the city's municipal authority. A committee should be set up to establish procedures and guidelines for the sustainable development of Khon Kaen city and its surrounding areas. The land-use plan should cover the area of Khon Kaen city and its surroundings up to a radius of five kilometers from the city's bypass road.
- Participation of stakeholders is key for land-use planning. The planning process should be inclusive of people from all sectors, especially those who are affected by development projects. Consideration should be given to the natural environment and the culture and way of life of local communities. For sustainable city development, emphasis should not be only on building infrastructure for commercial benefits. Moreover, supervisory mechanisms should be out in place to ensure the land use follows the relevant rules and procedures such as residential and commercial zones, minimum green areas for parks, etc.
- Khon Kaen city municipality should prepare a plan to minimize the city's environmental impacts on suburban areas. The municipality should focus on solutions to the key problems faced by the surrounding sub-district municipalities such as the improper dumping of city wastes.

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