5. HANOI - CITY IN EXPANSION
5.1 Introduction

Background

The expansion of Hanoi - the capital of Vietnam - in 2008 due to urbanisation and industrialisation process has resulted in the loss of vast agricultural lands and affected the livelihood of existing farmers and the farming industry. This research focuses on the Hanoi peri-urban zone through the theme of farms as workplaces. The farming industry has been forced to transform to deal with changes such as insufficient productive lands, environmental contamination and unemployment.

Site observation

The site is located at Mieu Nha village which is next to Hoa Lac Highway, 15 km to the West of Hanoi’s center. The Hoa Lac highway is expanding to a ten lane highway which connects the Hanoi center and the new satellite city of Hoa Lac. Along two sides of the highway are new office and residential projects. The Mieu Nha village is surrounded by farmlands, industrial factories and new urban development areas. Most of the village’s farmland has been taken by the government for planned urban and industrial projects. Some existing industrial factories will also be displaced to Hai Duong city which is 60 km away from Hanoi. The agricultural landscape around the village is contaminated by industrial activities and construction process of the new urban areas and the highway.

Research aims

1. Investigating the new expanded city of Hanoi and its changing urban landscape and built environment
2. Finding alternative models for the peri-urban agriculture to sustain the livelihood of farmers
3. Testing strategies developed in the previous “Peripheral Living” project which tested temporary use and edge intervention

Design strategy

The project includes three speculative interventions providing laboratories for farming adaptation in production lands waiting for development. The waiting time for these projects might range from 2 to 10 years. This time gap provides an opportunity to transform the farming industry in the peri-urban zones. By applying strategies of time phasing, edge intervention, hybridization/cross-programming, the research has proposed to resist farming displacement and transform the local agricultural industry. In the Hanoi project, I have explored further the transformation of peri-urban environment in three phases of time – existing (now), transitional time gap (2-10 years) and speculation of fully developed urban areas (10-30 years). There are three interventions in the investigated area. The first intervention is a permanent organic farming institution testing the idea of farming as educational tool for farmers and prisoners through working with agricultural production. The second intervention is a temporary farming adaptation factory made by reusing displaced factory in transitional period. The third intervention is an agricultural museum combined with village market aiming at educating the public about the history of agriculture and future urban technology. This intervention also transforms the village and attracts more people into the village for tourism or food consumption purposes.
5.2 Hanoi Masterplan 2020-2050

The city of Hanoi expanded 3.63 times in 2008 from 921 km² to 3,345 km² to prepare for future population growth, industrialization and modernization process. The new Hanoi Masterplan shows new ring roads and five satellite cities including Son Tay, Hoa Lac, Xuan Mai, Dai Nghia and Phu Xuyen. This helps to reduce pressure on the city center and creates a more equal development across the city.
Hanoi urbanisation process with 1,736 urban and industrial projects during the period 2000-2010 affecting the livelihood of 150,000 farmers with the loss of 11,000 hectares of farmlands.
Work transformation diagram

The diagram shows the process of how Hanoi peri-urban farmers change their jobs according to the displacement of their productive farmlands for urbanisation and industrialisation. They have compensation from the government and developers but have not used the money wisely which forces them to migrate to the city to seek employment.
(Source: Nguyen 2009)
Agricultural typology comparison

The diagram shows the comparison of financial gains and labor requirement between rice cultivation and vegetable farming. It is more profitable for farmers to grow vegetables instead of rice in the peri-urban zone because they have less agricultural land available and get a higher profit selling vegetables.

**Land Area**
- 300 m² vegetable
- 10,000 m² rice

**People employed**
- 1

**Income**
- 300 m² vegetable:
  - 115 AUD/month
  - 1,375 AUD/year
- 1 hectare rice:
  - 7 tons/hectare
  - 25 c/kg rice
  - 1,600 AUD/hectare
- 1 ha = 45,500 AUD/year

- North Vietnam:
  - 2 rice seasons/year
  - 1 ha = 3,200 AUD/year

**Agricultural typology comparison**

The diagram shows the comparison of financial gains and labor requirement between rice cultivation and vegetable farming. It is more profitable for farmers to grow vegetables instead of rice in the peri-urban zone because they have less agricultural land available and get a higher profit selling vegetables.
Area of investigation - aerial view
Sketch of critical points of interventions for agricultural programs in a transitional landscape
Phase 1: The existing peri-urban landscape is fragmented and polluted by industrial projects. People live in the village and work on farmlands around it. However, a large area of farmland is put on hold for urban developments. The farmers cannot do farming on these areas and become unemployed. Only a small number find jobs in factories nearby.
Phase 2: The peri-urban landscape in the transitional phase (2-10 years) starts to be dominated by built urban projects such as the North An Khanh taking over farmland. There is still a large area of farmland put on hold to wait for development. This is the chance to intervene into some strategic locations providing both temporary and permanent farming infrastructure in order to maintain local food production and the livelihood of farmer.
Phase 3: Fully developed peri-urban environment

Phase 3: The peri-urban landscape will be dominated by urban projects taking over farmland. Only pockets of farmlands are left. The interventions which are next to permanent programs will have better chance to stay and continue to provide local farming products. With this scenario in mind, I then work backward to the phase 2 which is the transitional phase.
5.4 Intervention 1: Farming institution for farmers and prisoners

Due to the fact that land and water resources have decreased significantly, the farming industry in the Hanoi peri-urban zone is under the threat of total displacement. The project starts with the question: Which surrounding programs are permanent that agricultural production can collaborate with to maintain its existence in the area? Interestingly, the most permanent program is the nearby Hoa Lo prison. The prison was originally located in the center of the city from 1886. In 1994, it was moved to the West peri-urban area of Hanoi. The research theme of my second semester which initiated by supervisors is “Workplaces”. Therefore, by thinking about farming as one type of work, it is an opportunity to use farming as working type for the education of the prisoners during their sentenced period. A farming institution for both farmers and prisoners is created to provide infrastructure for educating both farmers and prisoners about new urban farming technologies which use less resources such as land to provide more agricultural products. The institution is located on the edge of farmland and Hoa Lo prison to intensify the use of land and to cross-program between two functions. It creates a controlled interaction between two groups of users and also mutual benefits. Even though the farmlands might be taken away by urban projects, the farming institution will stay permanent in the area.
History of Hoa Lo prison moving from the city center to the peri-urban zone
Case study sketches of Giovanni Battista Piranesi’s The drawbridge Plate VII - Imaginary prisons

The drawings of imaginary prisons by Piranesi stimulate thoughts on different ways to control movements of the farming institution. How to design the architecture and the interface between farmers and prisoners? The drawings show how we can work out the plans from the perspective. Piranesi’s perspective drawing reveals contradiction and interesting juxtapositions of architectural elements. This makes the plans hard to define and the positions of columns and bridges become shifted and blurred.

Sketches of the bridge and the interface between farmers and prisoners, inspired from Piranesi’s The drawbridge

Piranesi’s drawing - The drawbridge Plate VII

The sketch shows activities happening in the farming institutions with an emphasis on the edges

First floor plan interpreted from Piranesi’s perspective drawing

Fourth floor plan interpreted from Piranesi’s perspective drawing