

The Impacts of the urbanization to the pre-urban agriculture area of Hanoi.

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ABSTRACT:

Asia is a continent which has numerous of high density deltas. The South and South-east Asia content two kind of deltas: high density deltas and low density deltas.

The Red river delta is a high density area (940 persons/kilometer square). The development of this area is concerned with the industrialization and urbanization processes. At the beginning of the innovation period, agriculture field has a speedy development, so that the farmers not only can full fill the demands of foods by themselves but also they can export their products. However, there are still remain some difficulties, the reasons are:

- Lack of market: The overseas markets, such as in Soviet and eastern Europe are no longer exist. The domestic market has not been developed because of the low buying power of the peoples.
- Cultivated lands has not been reasonable distributed. With the speedy urbanization and the development of infrastructure, the land speculation are being very popular.
- The development of industry and urban services can not help to solve the problem of labour redundant. The citizen's migration to the urban and expandable area are being more and more popular day by day.
- Lack of evident urban planning and rural development policies
- Environmental pollution problems proceeded from the urbanization and industrialization has not been well-defined with a realizable solution.
- The development of the market regulations and farmer organizations are being carried out with out a specific plan and instruction

From the past up to now, the research of urban and industry planning are being carried out apart from the rural development, therefore, many issues has not been completely researched. Consequently, it is necessary to set up a project on researching the relation among industrialization, agriculture development and rural development.

Asia is consisted of many high density deltas. The development of these deltas has been paid attention for a long time by scientific professions.

There are two kinds of deltas in the Southern and East-Southern Asia: High density deltas (more than 300 citizens/km²) which is 250 000 km² with 120 million citizens and Low density delta which is 120 000 km² with 10 million citizens (Gourou, 1974).

It is difficult to predict the development of the deltas like Red river delta. Follow the estimated of P. Gourou, the population of the Tonkin delta will reach 13 million by the year 2001. In fact, this number is 14,2 million in the year 1998 – more than 2 times increased. The forecast of P.Gourou about the increasing of population was right, but not their concern about the rations. The delta was not only satisfy the demands of food but also have redundant product to export.

It is possible to imagine about the future of the delta if we compare it with more crowed deltas in the Eastern of Asia, such as: Japan, China. Although the population density and the number of non-agriculture population in these deltas are higher than it is in Red river delta, the agriculture production is also 2-3 times higher. With the policy of stressing on goods plant and animal breeding, it is necessary to import food for supporting the development.

Thus, only a very strong industrialization and urbanization ensures the development of these deltas. The model of development in the South-eastern Asia can not follow the Southern Asia which have to import food from others. The development must obtain these targets: Quick industrialization, agriculture developing, increase farmer's income and ensure food security since it is difficult for big countries to import food from others. Hence, for the development of these high density deltas, it is important to develop the agriculture since the urbanization and industrialization are in quick progress.

It is estimated that the urbanization will be at a quick progress. The rate of urban population will increase from 50% up to 70% between the years of 1995 to 2025. The Megapolis will be formed in the future.

The concept of Megapolis was formed in 1950 by J.Gotunan (1978) – a French geographer while studying the Northern-East region of America. The conditions of Megapolis include:

- Port
- Play the role of crossroads
- High density of liaisons
- High density of population
- Economic system in which services play an important role.

Presently, 50% of Asia population are living in urban areas, estimation of the year 2025 is 70%. In the year 2010 there will be 13 Megapolis with 10 million citizens of which 7 Megapolis belongs to Asia. Also in this year there will be 30 cities with more than 5 million citizens (while this number is 2 in America and 6 in Europe).

Shanghai, Bombay will be cities with more than 20 million citizens and Beijing, Dhaka, Jakarta, Manila, Thien Tan, Calcutta and Delhi will be cities of more than 15 million citizens.

The issue is how urbanization can ensure the development of agriculture. More lately issues are urban agriculture and pre-urban agriculture with different goals. To solve this problem, it is necessary to study about the relation between urban and agriculture.

Some researched models of urban agriculture:

- According to Von Thunen's theory (1986): It is the transportation cost of production from the factories to the markets (of the cities) to decide the allocations of rural production. In order to decrease the cost of such products which are in big volume and difficult to preserve (fruits, vegetables, milk...) these products should be produced nearby consuming markets. Supposing that, only transportation cost changes, the interest rates gained upon a cultivated area are calculated according to the following formula:

$$\text{Interest rates/ area} = E(p - a) - Efk = D(p - a - fk)$$

In which:

E: The volume of production/area

P: Market price

a: Production cost of one unit

f: Transportation cost of one unit upon length

k: Distance to the markets

- According to R.J.Sinclair's theory (1967): Urbanization is at a promptly progress in cities and even much faster in comparison with the augment of transportation cost. This is a reason why the farmers nearby cut down on their investment on rural production. As a result there is a contradiction of interest rates in rural production creating different belts of interest from interior and exterior of the city.
- According to C.B.Bryant's theory (1973): It is the combination of the two above models. He persists in his idea that there are only some kinds of agriculture which are badly influenced by urbanization pressure since it is determined by the time-limit of capital withdrawal. (For instance, growing grapes or long-term fruits creates advantages for urbanization). Likewise, most of the forms of rural production which are different in interest rates directly related to the urban development, the activities and benefits of markets.

It is shown that urbanization has created these issues:

- A great change in agriculture environment depends on form and scale of urbanization.
- Pre-urban agriculture was influenced by urban labour market, technology, Domestic and international competitions and government's policies.
- These factors bring about both negative and positive influences, so it is necessary to study about their reciprocal influences: (i) influences of economic structures on agriculture production, (ii) The role of farming family and their reactions to the environmental changes.

Consequently, studying methods must be an approach to the system in which rural environment (source of income, social and economic scale) and exterior rural environment (the forces of urbanization as well as the changes in technology) having influence on rural mechanism (social economic and farming mechanism, adaptable technical production). Internal factors of the farm (scale, owing, and specialization) as well as the family (unit owner's age, children and values of the family) also play a very important role.

Actual studies of nearby urban areas shows 3 kinds of regions:

- degenerated agricultural region
- accommodated agricultural region
- developed agricultural region

Development point of view is necessary to be organized based on 5 following elements:

- Values and benefits in local environment
- Agents and intervenes
- Net work of influences, power and relations of which agents and intervenes pursue their interest
- In progress activities
- General condition: Social – economic – politics – legal of local dynamic

Frequently encountered problem in distinguishing urban and rural areas is standard of distinction between urban and rural areas.

It is often distinguished some territorial concepts as follows:

- Administrative urban territory
- Physically urban territory with urban construction works and non-agriculture areas.
- Functional urban territory, includes areas which has social-economic relation with urban and integration tendency with urban.

Red river delta is a high density area. The development of this area related to the industrialization and urbanization progress. At the beginning of the innovation period, agriculture field has a speedy development, so that the farmers not only can full fill the demands of foods by themselves but also they can export their products. However, there are still remain some difficulties, the reasons are:

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- The development of the market regulations and farmer organizations are being carried out with out a specific plan and instruction.

Recently, on studying, we noticed that it is difficult to achieve diversify production in Red river delta. In totally 72 suburban districts of the delta, there are 41 districts with decreasing diversify index, 6 districts with little changing diversify index and 25 districts with increasing diversify index. 10 among these districts formed a belt surrounding Hanoi with strong diversifying progress since it was influenced by urbanization (Box below)

The influences of urbanization on agriculture diversify in the regions around Hanoi					
<i>Right index: annual decrease and increase</i>					
<i>Left index: Diversify index</i>					
Ba Vi	0,80	+0,01	Tien Son	0,65	-0,14
Thach That	0,64	-0,72	Tam Dao	0,68	1,36
Phuc Tho	0,75	-1,31	Me Linh	0,76	0,11
Dan Phuong	0,75	0,02	Soc Son	0,73	0,44
Quoc Oai	0,68	0,28	Dong Anh	0,73	-0,26
Hoai Duc	0,73	0,42	Gia Lam	0,73	-0,39
Tu Liem	0,70	-0,44	Chau Giang	0,77	0,68
Thanh Tri	0,74	-0,28	Kim Thi	0,58	1,61
Thuong Tin	0,66	0,24	Phu Tien	0,57	0,16
Phu Xuyen	0,57	0,05	My Van	0,59	-0,24
Thanh Oai	0,60	0,13	Cam Binh	0,53	-0,14
Chuong My	0,71	-1,21	Tu Loc	0,60	1,17
Ung Hoa	0,60	-0,74	Nam Thanh	0,56	-0,66

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