

UNCERTAINTY GAP BETWEEN LAND USE PLANNING, DECISION MAKING, AND IMPLEMENTATION – ANALYSIS OF THE GREENBELT POLICIES OF BEIJING, CHINA

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ABSTRACT: Among various policies on implementing the greenbelt plan of Beijing, the 20th Policy issued in 2000 was the most influential. During the past eight years, the 20th Policy has brought unexpected impacts, including rapid urbanisation, and the shrinking of natural open space in greenbelt areas, which seriously hinders the sustainable development of Beijing. Herein, we explore the effectiveness of the 20th Policy in Beijing, by evaluating the contents, implementation process, and implementation results of the 20th Policy with the case study of Yuquan village. In addition, some suggestions are proposed to solve the problems of greenbelt policies in Beijing, China.

KEYWORDS: greenbelt policy, decision making, implementation, Beijing

1 INTRODUCTION

Beijing's greenbelt was first proposed in the comprehensive plan of 1958. At this time it was regarded only as a spatial development principle in the plan and was not actually implemented until the 1990s. Because of a lack of substantial policies on spatial management, the proposed greenbelt areas were occupied by more and more urban development projects. According to a survey report of the greenbelt in 1993, there were only 420,000 hectares of afforested green area in the 2,410,000 hectare planned greenbelt area (Yang Xiaopeng, 2008, pp.26). In considering this severe situation, the municipal government of Beijing began to bring forward several policies on implementing the greenbelt plan in the 1990s, with the introduction of a market mechanism. The 7th Policy (*The Announcement on Implementing the planned greenbelt in Urban Areas*) issued in 1994, was the first policy to introduce the market mechanism into the implementation of the greenbelt plan, but was soon suspended in 1997. Among various policies issued by the municipal government, the 20th Policy (*The Interim Measure on Enhancing the Development of Beijing Greenbelt*) issued in 2000 was the most influential. During the past eight years, the implementation of the 20th Policy brought unpredicted impacts to the greenbelt area, including rapid urbanisation and increasing social conflicts in proposed greenbelt areas. These unpredicted impacts show that there are large gaps between decision making and implementation in the greenbelt policy.

Research on greenbelt policies and their impacts has been done by many researchers on various countries and regions. There are research works analysing the greenbelt policies of Seoul, European city regions, Canada and USA (Chang-Hee Christine Bae, et al. 2003; Manfred Kühn, 2002; James Taylor, et al. 1995; E. Douglass Williams, et al. 2003). Particularly, there are some research works on the greenbelt policies of Beijing. Former research works include the analysis of preparation work for the greenbelt plan (Feng Li, et al. 2005), the satellite data analysis (Jun Yang, et al. 2007), the comprehensive analysis of integral greenbelt policies (Yang Xiaopeng, 2008; Tan Qiu, 2008), and so on. However, former research works focus mainly on integral greenbelt policies, while a detailed analysis on decision making and implementation of a specific greenbelt policy is rarely done.

This paper carefully studies the effectiveness of a representative greenbelt policy of Beijing, the 20th Policy. The objective of the work is to find out the reason why the greenbelt policy did not achieve expected

results and to give suggestions, by evaluating the contents, implementation process and implementation results of the 20th policy, using the case study of a village in the greenbelt area of Beijing. This case study on a typical policy could give effective suggestions to other researchers and municipal governments on preparing and implementing new greenbelt policies.

2 STUDY AREA AND DATA COLLECTION

The chosen case study area is Yuquan village, an ordinary village in the 1st Greenbelt¹ of Beijing. The boundary of the 1st Greenbelt and the location of Yuquan village are shown in Fig.1.

Yuquan village is located in Haidian District, in the northwest of Beijing. Its total land area is 800.05 hectares, and it is designated as part of the proposed greenbelt area under the Comprehensive Planning of 1st Greenbelt in 2000. In this village, there is a total of 9,892 villagers, who are called registered permanent residents. Significantly, there are large amount of room renters in this village, who are called floating residents in governmental statistics. The total floating population in this village is 61,000, much more than the registered permanent residents (UPDHD, 2009).

Yuquan village is chosen as the case study in this research for its representation of the common situation of villages in the 1st Greenbelt. Most of these villages are near the built-up area of the central city, and are termed part of the rural-urban fringe zone. The land prices of the surrounding built-up areas are very high, while the land in these villages cannot be sold by villagers themselves according to related laws on managing rural land. After their farmland is occupied by new afforested greeneries, the villagers mainly live on renting their redundant rooms to floating residents.

The data of Yuquan Village in this research comes mainly from the urban planning administration of Beijing and the Beijing Tsinghua Urban Design & Planning Institute. Some additional data is collected from academic literature.

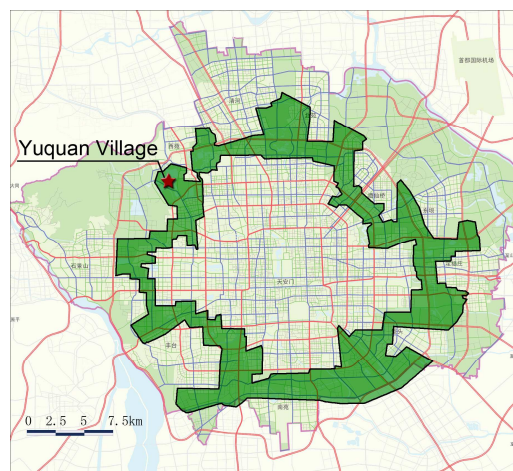


Figure 1 Boundary of 1st Greenbelt and location of Yuquan village in Beijing

3 CONTENTS AND IMPLEMENTATION OF THE 20th POLICY

3.1 Contents of the 20th Policy

The 20th Policy was issued by the Beijing municipal government on March 29th, 2000. This policy soon became the most important and efficient policy on implementing the afforesting of the 1st Greenbelt. According to the Comprehensive Planning of the 1st Greenbelt, the main goal of the policy was to afforest 1,250,000 hectares within the 2,410,000 hectares of the 1st Greenbelt. Later another 719,300 hectares was added into the 20th Policy validated area (Tan Qiu, 2008, pp.22), therefore, the total area covered by the 20th

¹ Beijing has two greenbelt areas. The Comprehensive Planning of 1st Greenbelt was issued in 2000, and covered about 2,410,000 ha. The Comprehensive Planning of 2nd Greenbelt was issued in 2002, which was located outside the 1st Greenbelt, and covered about 16,500,000 ha.

Policy was increased to about 3,100,000 hectares.

It has to be particularly mentioned that the main goal of this policy was to accomplish the “afforesting of the greenbelt area” in the pending 3-4 year period, rather than the “conservation of the greenbelt area”. “Afforesting” denotes where current farmland or built-up areas are converted into woods or public nature parks. It was manifested in the policy that the municipal government was eager to fulfill the future scenario of a beautiful greenbelt around the urban built-up area.

The contents of the 20th policy contained various instruments to encourage the afforesting actions. To make it more explicit, the instruments in the policy could be classified into four main types, shown in Tab.1: (1) Subsidies to afforesting and maintenance of greenbelt, (2) Permission on constructing profit-making projects, (3) Integration of constructing relocated residential buildings and commercial residential buildings, (4) Relocation of certain existing corporations outside of the greenbelt.

Among these 4 instruments, the instruments Two and Three were the most important. They revealed that the municipal government did not itself have enough funding for afforesting the greenbelt within the short timeframe and needed financial support from private investors. The key measure of the 20th Policy was to introduce private capital into the afforesting action.

Table 1 Instruments to achieve the 20th Policy’s goal

(1)Subsidies to afforesting and maintenance of greenbelt	The subsidies are 5,000 RMB per 0.067 hectares for afforesting and 120 RMB per 0.067 hectares a year for maintenance ² , from the municipal financial budget.
(2)Permission on constructing profit-making projects	Those who afforest more than 6.67 hectares of greenbelt can obtain 3-5% of the afforested area quota for constructing profit-making projects, except real estate development and industry.
(3)Integration of constructing relocated residential buildings and commercial residential buildings	It is encouraged to build new land-saving relocated residential buildings in greenbelt areas for villagers. Some commercial/residential buildings can be built and sold for the funding of relocated residential buildings. The proportion of relocated residential buildings for villagers and commercial residential buildings for selling is 1:0.5.
(4)Relocation of certain existing corporations outside the greenbelt	Those corporations unsuitable for greenbelt area should principally move to designated industrial areas outside of the greenbelt.

3.2 Ideal implementation scenario of the 20th Policy proposed by government

The implementation scenario of the 20th Policy was attractive. In that scenario, on one hand, the private investors helped the municipal government to afforest greenbelt areas and to construct relocated residential buildings, and were awarded with valuable land. On the other hand, the government accomplished a beautiful greenbelt for the city, and the villagers acquired their new apartments and new jobs.

The ideal scenario could be found from the land use plan of Yuquan village submitted to the urban planning administration in 2000. It showed what the government expected to happen in Yuquan village.

In the 2000 plan, the four major instruments in the 20th Policy were expected to work well, and the government would subsidise investors for the afforesting of the greenbelt area. Investors afforesting the greenbelt would get the permission to construct profit-making projects in greenbelt area. If one corporation helped to construct new relocated residential buildings for villagers, it would be rewarded by being allowed to build and sell additional residential buildings in the real estate market, whose amount equaled half of the amount of the relocated residential buildings. Lastly some existing industry corporations would move out of this area and leave more land for other types of development.

As a proposed reciprocal result of this policy, the change of land use proposed by the plan in 2000 is shown in Fig.2. The proposed land use distribution was very satisfying. Firstly, the amount of afforested area was greatly increased, which contributed to the fulfillment of the greenbelt environmental development goal. Secondly, the amount of proposed urban built-up area, which referred to residential and industrial land use,

² 0.067 hectare is 1 mu. Mu is traditional unit of area in China.

reduced to less than that previously. Thirdly, the amount of residential area for villagers decreased greatly due to the higher density of new relocated residential buildings, saving some land for new industry developments and commercial residential buildings to sell. Fourth, some old corporations would be replaced by new industries which were more suited to the greenbelt area and those industries were intended to employ villagers who had lost their farmland.

Unfortunately, this plan was only prepared in an ideal way to follow all the requirements of the 20th Policy, so that it could easily obtain approval from the administration. It presented neither the real expectations of villagers nor the desires of investors, but only the ideal wishes of municipal government.

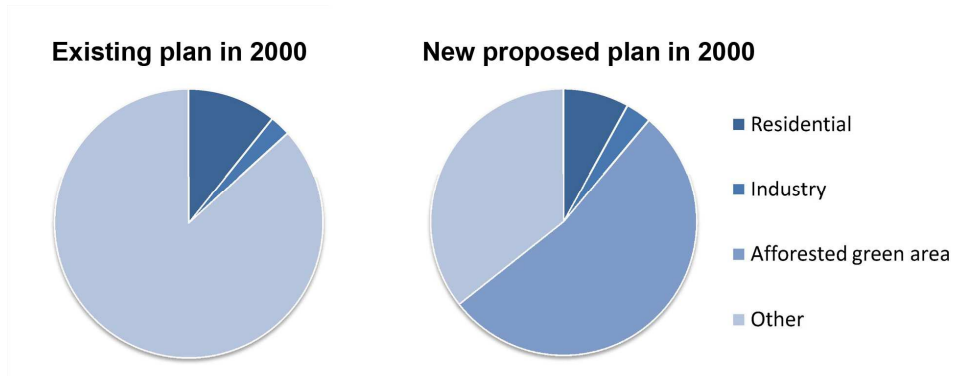


Figure 2 Share of existing and proposed land use plan of Yuquan village in 2000³

3.3 Implementation process of the 20th Policy

The proposed land use plan was submitted to the urban planning administration in 2000, and was approved in 2002-2003 for its different implementing stages, with slight changes. However, this ideal reciprocal scenario did not eventuate in the ‘real world’ implementation process. The four instruments encountered much resistance in the process of implementation.

Firstly, the subsidies to afforesting and maintaining greenbelt were widely objected to by villagers for their inadequacy. The complaint from the villagers appeared reasonable. While the farmland was now mostly occupied by non-profit woods, the subsidies for afforesting greenbelt could not compensate the former output of farmland. And subsidies for maintaining the greenbelt was much lower than that in urban green areas, hence there were few villagers in Yuquan village who wanted to work as a greenbelt maintainer for the low salaries.

Secondly, as the order of afforesting the greenbelt area and constructing the awarded profit-making projects was not defined clearly in the 20th Policy, some speculators constructed their own profit-making projects at first, and left the proposed afforested greenbelt area unfinished or disqualified. In Yuquan village, only 83% of the proposed afforested green area had been finished and was of low quality (BTUPDI, 2007), while the land quota for profit-making projects had been fully occupied. Moreover, many citizens complained to government that some of the so-called afforested green areas in other villages were actually private golf courses.

Thirdly, the integration of constructing relocated residential buildings and commercial residential buildings on the proportion of 1:0.5 was doubted by investors. As the land price around Yuquan village was very high, the villagers required sufficient compensation for their land. This greatly increased the cost of relocating the villagers into new apartments. All the investors believed that the proportion of 1:0.5 was unacceptable, and they made great efforts to change the proportion to almost 0.5:1.

The proportion of 1:0.5 was changed again and again during the policy implementation process. This could be found from the transformation of the residential building area during 2000-2008 in Yuquan village (Fig. 3). At first, according to the application plan in 2000, the total residential building area was 652,000m², including 456,000m² relocated residential buildings and 196,000m² commercial residential buildings. In 2003, the plan was officially changed several times under pressure from investors. The proposed relocated

³ The type of “other” contains farmland, roads, and water surface.

residential building area was changed to 418,000m². Then, when the development agreement was signed later in 2003, the amount of relocated residential building area decreased to 241,000m², and commercial residential building area increased to 411,000m² without official authorisation. Finally, in 2008, the amount of building area which had been constructed for relocated and commercial residential buildings was 154,000m² and 213,600m² (UPDHD, 2009). This meant half of the quota for constructing residential buildings had been used, and only a quarter of the villagers had their new apartments.

Fourthly, as there were no sufficient supporting measures for relocating the existing corporations, the instrument of the 20th Policy on relocating unsuitable corporations was not effective.

According to the reasons above, the goal of afforesting greenbelt area was not achieved in Yuquan village until 2008, while the 20th Policy aimed at achieving it before 2004.

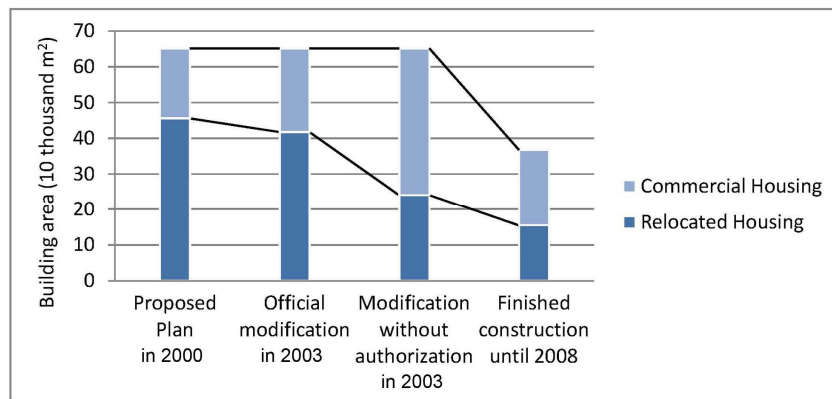


Figure 3 Changes on proportion of relocated and commercial residential buildings in Yuquan village

3.4 Implementation results of the 20th Policy

The case of Yuquan village had an unusual result, because it was selected as a proposed paradigm on the integration of the development of a village and the achievement of the greenbelt's goals. Since the beginning of 2009, the problems in implementing the 20th Policy in Yuquan Village has been given much attention by the municipal government and public media. Eventually, the problems in Yuquan village were solved with the additional of large amounts of administrative and financial cost.

A new land use plan of Yuquan Village was proposed (Fig.4), and its official approval procedure took less than one month. The new land use plan greatly increased the residential and industrial land area quotas, in order to solve the existing problems of insufficient land for economic development. Most of the new approved residential land was forced to be used for relocated residential buildings, and the new industrial land was used to compensate the cost of housing construction and for the long term benefits of villagers. Moreover, some motivational measures were adopted for encouraging the villagers to move from their existing houses to newly built relocated apartments. For example, if a family chose to move earlier than the proposed deadline, the family members could get a bounty of 50,000 RMB. By virtue of the hard work of many officers from different administrative departments, it was expected that the new relocated apartments would be accomplished by October, 2009, and half of the villagers could move to their new apartment before May, 2010.

The outcome of Yuquan Village's case seems like a happy ending, however, it cannot be applied to most other villages in greenbelt area, because the cost for the government to carry out the afforesting goal is too high. Because there were insufficient commercial residential buildings to sell for funding in Yuquan village, the government paid a large amount of money to support the construction of new housing with total financial support from the government over 1,500 million RMB. In spite of such a large cost, after carrying out the 20th Policy, the built-up area in Yuquan village will still be larger than that of the year 2000 (Fig.5).

In reality, most villages remain at the stage that Yuquan village faced at the end of 2008. According to a survey done in 2007, 41.74% of the relocated residential buildings, 66.72% of the greenbelt area and 121.38% of the commercial residential buildings had been finished in 1st Greenbelt area (Yang Xiaopeng, 2008, pp.69). Much farmland is occupied by commercial residential buildings and profit-making projects,

while afforesting of the greenbelt area and relocated residential buildings for villagers lagged behindhand.

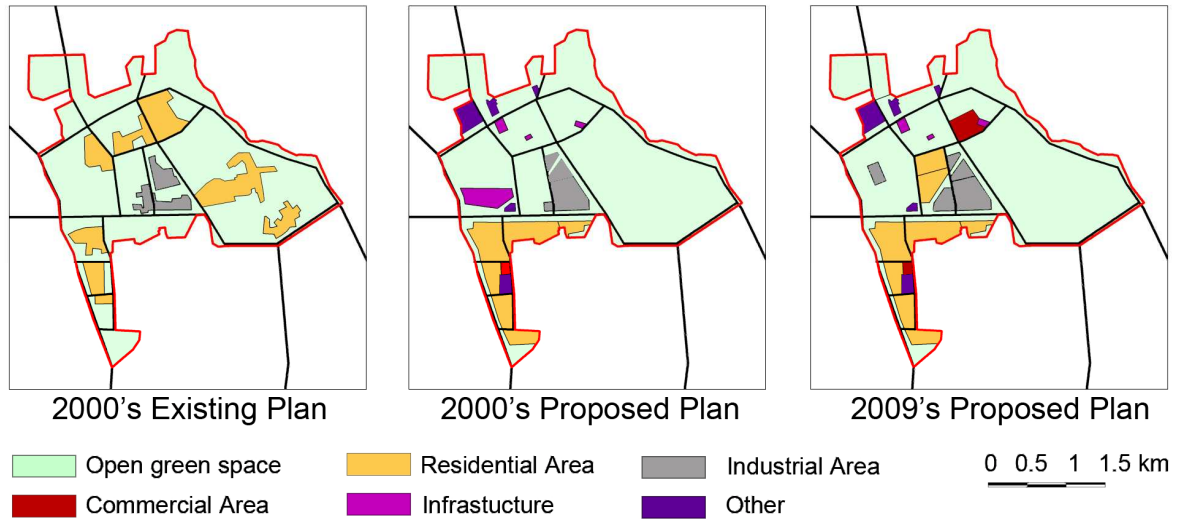


Figure 4 Transformation of land use planning of Yuquan village

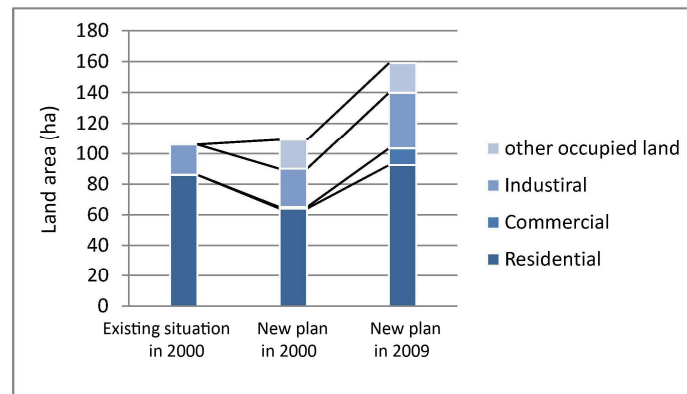


Figure 5 Transformation of the built-up area in land use plan of Yuquan village

4 EVALUATION OF THE 20TH POLICY

4.1 Gains and losses of the 20th Policy

Based on the content, implementation process, and implementation results of 20th Policy, the gains and losses of this policy can be clearly revealed. It could be said that this policy brought many unexpected problems and failed to achieve the expected results.

As for gains, this policy greatly accelerated the afforesting of greenbelt compared with the sluggish greenbelt conservation for about 40 years. The proportion of afforested green area in the 1st Greenbelt increased about 50% during past eight years. Based on the encouragement of the policy, many private investors joined the afforesting of the greenbelt and the construction of new relocated residential buildings for villagers, mitigating the financial deficiency of the municipal government.

As for the losses, it appears to have brought long term negative influences to the greenbelt area. On one hand, when the 20th Policy was implemented, more and more greenbelt areas were occupied by projects of unsuitable use or illegal construction, and the government was often unable to reclaim former residential and industrial land after new construction had finished. This might be an underlying obstacle for future reclamation of these lands. On the other hand, in many villages in the greenbelt area, where quotas for new

residential space ran out of, and most of the farmland had been transformed into afforested area, the villagers still lived in their old houses and earned their living only by renting rooms and getting small subsidies from the government. Living conditions in the old villages has become increasingly worse. This will likely bring severe social problems in the future.

4.2 Reasons for large gaps between decision making and implementation of the 20th Policy

There are two main reasons the 20th Policy did not achieve expected results. One is that the government neglected the interests of related stakeholders during the policy decision making process. The other is that the actions of speculators were not effectively supervised during the policy implementation process.

(1) Neglecting the interests of related stakeholders during the policy decision making process

In the 20th Policy, the government appeared to introduce a balanced cost benefit relationship model among government, private investors, and villagers, which is shown as proposed model in Fig.6 (a). In this proposed model, the government reclaimed land ownership from villagers by subsidies. Subsequently private investors were invited to invest on afforesting green areas with the compensation of land for profit-making projects, and to invest in constructing relocated residential buildings for villagers with the compensation of land for commercial residential buildings. The villagers relinquished landownership and received new apartments and new jobs in the profit-making projects and in maintaining the afforested green area.

However, in reality, the policy was made by the government unilaterally. Both the villagers and private investors were dissatisfied with the benefit distribution in the policy. The insufficiency of subsidies was criticised by villagers, because the amount of subsidy provided was decided by the government based on how much it could afford, not on what was fair. The share of relocated residential buildings and commercial residential buildings was also decided by the government, which was supposed to be acceptable to the private investors. Because the requirement of land and house compensation of villagers was not well considered in the policy, investors found they could not afford the total cost.

According to discontent mentioned above, when this policy was implemented, the proposed balanced cost benefit relationship model in Fig.6 (a) was greatly distorted. The actual cost benefit relationship model is shown in Fig.6 (b). Private investors were undoubtedly the winners in this interest game. They obtained new land for profit-making projects, even though they did not fulfill their promises to afforesting green areas. They also gained considerable profit from selling commercial residential buildings, even though they did not accomplish the construction of relocated residential buildings. The government received some benefit from this game, for at least some of the afforesting has been finished during the last eight years. Overwhelmingly, the villagers were the losers in this game. They lost most of their farmland and received little compensation. Most did not receive new apartments or new satisfying jobs. Even for those who had new apartments, it was still unfair because the value of the new apartments were usually lower than their original land value.

(2) Poorly supervising the actions of speculators during the policy implementation process

The actions of speculators were not well supervised during the implementation process of the 20th Policy, due to ambiguity in the contents of the policy, and the weak supervising ability of the government.

The actions of private investors were not clearly defined in the policy, leaving loopholes for speculators. If it was prescribed that the afforesting of green area should be finished before the development of profit-making projects, and the construction of relocated residential buildings should be finished before the selling of commercial residential buildings, the conflicts in many villages might not have occurred.

It is strange that although there were many defects in the policy, it encountered little resistance from joint investors, and was even warmly welcomed by them. This was because investors found they could make large profits through the loopholes in the implementation procedure of the policy. The government had few punishments for speculators, and had very weak control of illegal construction. And as the villagers were the disadvantaged group, speculators could easily get what they wanted and this distorted the initial cost and benefit relationship model proposed by the government.

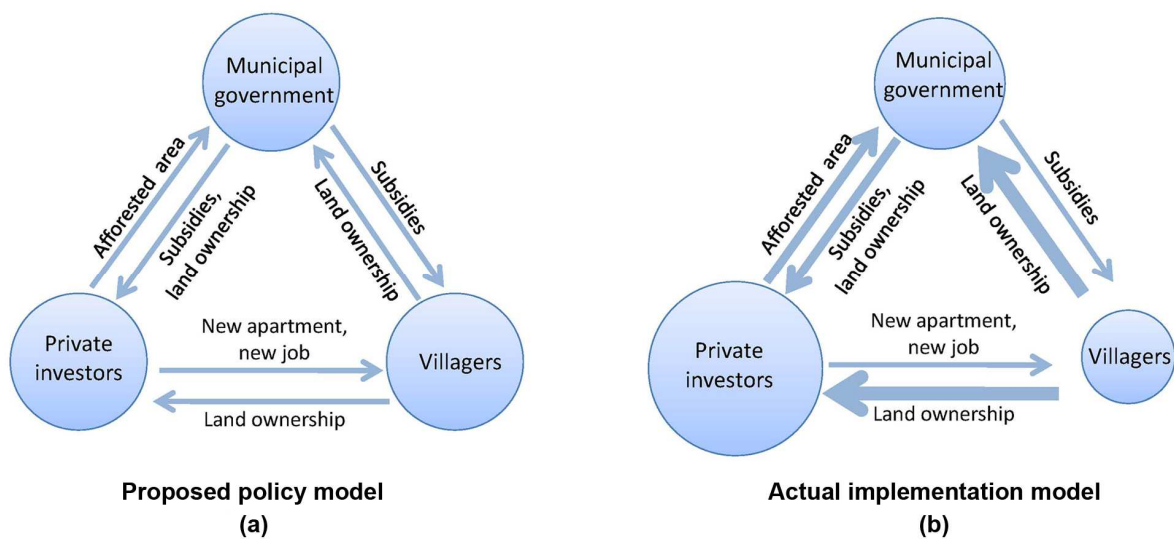


Figure 6 Distortion of cost and benefit relationship among stakeholders

4.3 Suggestions on future greenbelt policies

Based on the reasons for large gaps between decision making and implementation of the 20th Policy, several suggestions on improving future greenbelt policies can be put forward. It is suggested that more public participation should be adopted, with better supervision of speculative actions.

(1) Adopting more public participation

To achieve a more reasonable policy, additional public participation should be encouraged. It is impossible for decision makers in government alone to fully understand such a complex issue as the city's greenbelt. In reality, the interests of private investors and local residents are not able to be well considered, unless they are involved in the decision making processes of the greenbelt policy.

After adopting higher levels of public participation, the cost benefit relationship could be rearranged according to a reconsidering of the related stakeholders' actual requirements. The government should make more effort both on financing and managing the implementation of the greenbelt plan. The reasonable benefits of private investors should be considered, and they may be compensated by lands outside the area of greenbelt, hence the pressure on land use can be greatly decreased in the proposed greenbelt area. Villagers should have sufficient compensation or be well treated in regards to employment and welfare.

(2) Carrying out better supervising on speculative actions

To carry out effective supervision on speculative actions, the loopholes in the greenbelt policy should be closed. For example, the action order of afforesting the greenbelt area and constructing the profit-making projects needs to be clearly prescribed in greenbelt policy.

Strengthening the supervisory ability of the government is also necessary. Firstly, the land use planning management and the confirmation of qualified afforested greenbelt areas by the urban planning administration should be improved. Secondly, the control of illegal constructions needs to be strengthened, and the punishment measures for illegal speculative actions should become more rigorous.

5 CONCLUSIONS

In summary, it is clearly seen that there were many unexpected impacts during the implementation process of the 20th Policy, compared with its content. The government has not suitably achieved its initial goal of afforesting the greenbelt, and villagers lost most of their farmlands for little compensation. Only private investors received satisfying profits from the implementing the policy. As a result, much of the farmland in the greenbelt area has been occupied by commercial residential buildings and profit-making projects, while the afforesting of greenbelt area and the construction relocated residential buildings for villagers lagged far behind.

There are two main reasons for the problems mentioned above. One is that the government neglected

the interests of related stakeholders during the policy decision making process. The policy was unilaterally made by the government and both villagers and the private investors were dissatisfied with the benefit distribution in the policy. The other is that the actions of speculators were not supervised effectively.

It is strongly recommended that more public participation should be adopted, and better supervision of speculative actions should be carried out. A reasonable greenbelt policy should be made together by the government, villagers and private investors, in which related stakeholders achieve a well-accepted compromise on benefit distribution.

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