

Reference

UNDERSTANDING KUKAKU-SEIRI
(LAND READJUSTMENT)

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CONTENT

1.0 INTRODUCTION

- 1.1 Objective.
- 1.2 Historical Background of Land Readjustment

2.0 PURPOSE/EFFECTIVENESS OF LAND READJUSTMENT.

- 2.1 Development/Improvement of Urban Infrastructure
/Public Facilities.
- 2.2 Better Economic Use of Land.

3.0 KEY CONCEPT OF LAND READJUSTMENT.

- 3.1 Replotting.
- 3.2 Contribution.
- 3.3 Financial Land.

4.0 MERITS OF LAND READJUSTMENT.

- 4.1 Safeguarding Community Lifestyle.
- 4.2 Fair Distribution of Development Charge and Development
Benefit.
- 4.3 Low Development Cost.

5.0. THE FEASIBILITY OF IMPLEMENTING LAND READJUSTMENT PROJECTS IN OTHER COUNTRIES

- 5.1 Village improvement through the provision of adequate
infrastructure.
- 5.2 Redevelopment of Town Centres.
- 5.3 Development of New Housing Areas.

6.0 CONCLUSION

APPENDIX

I. 0 INTRODUCTION

1.1 Objective

The aim of this paper is to introduce the concept of land readjustment which has some unique characteristics.

Land readjustment can be used for developing an urban area without involving the process of land acquisition. The system involves the landowners contributing towards the improvement and provision of amenities in a project area in return for better development benefits.

Land readjustment has a unique financing mechanism for development. It is called self-financing. The self-financing system enables the implementation body to execute a project without much capital outlay, that is, land readjustment can help overcome land ownership and financial problems in the development/redevelopment of a project.

1.2 Historical Background of Land Readjustment

The technique of land readjustment has been practiced in Germany and Japan for more than 100 years. By the end of 19th century, Germany and Japan had adopted an industrialization policy to develop the country and became more developed than other western nations. This policy exploited urban areas because of its economy of scale and this brought about rapid rural-urban migration. Consequently, the urban infrastructure facilities were unable to sustain the rapid increase in urban population. This resulted in all types of urban problems including unsatisfactory services. To solve these problems comprehensively within the constraints of a limited land area and financial aid, land readjustment was introduced.

The Land Consolidation Act (the act which pioneered the Land Readjustment Act)* was established in Japan in 1899. In 1902, Franz Adickes, the former Lord Mayor of Frankfurt, Germany, introduced a completely new act on land readjustment called the Adickes Act (Lex Adickes).

Experience gained in the implementation of land readjustment for the rehabilitation of war damage projects in Germany and Japan after World War II has helped to refine the technique on land readjustment into a sophisticated system. In Japan, the Land Readjustment Act was passed in 1954 while in Germany, the Federal Building Act which contained sections on land readjustment was passed in 1960.

Thus, land readjustment helped Japan and Germany which were developing

countries in the 19th century progressed to become developed countries into the 20th century.

2.0 PURPOSE/EFFECTIVENESS OF LAND READJUSTMENT

2.1 Development/Improvement of Urban Infrastructure/Public Facilities

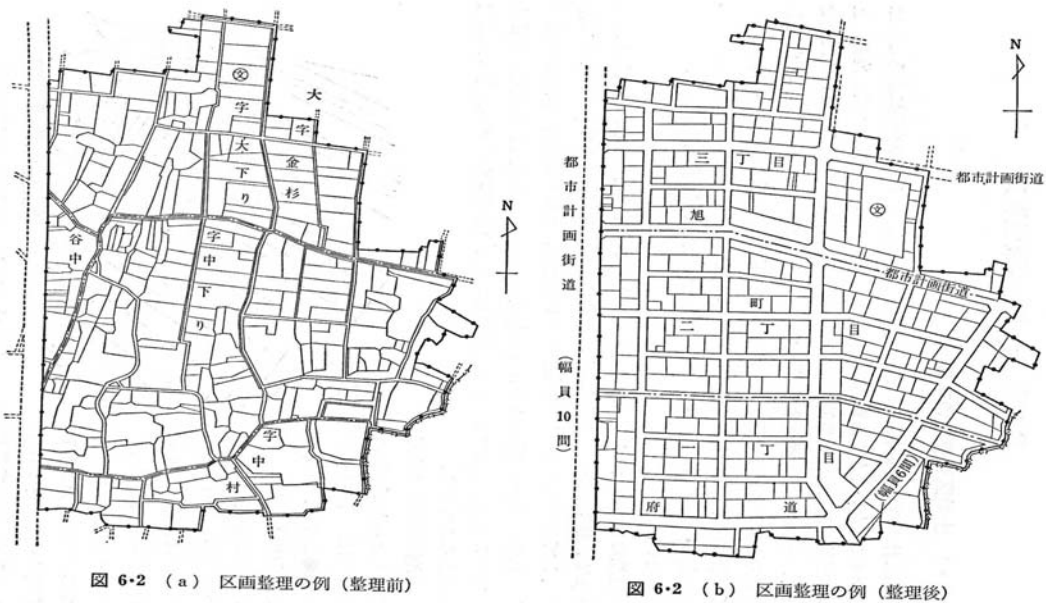
From the view point of town planning, the purpose of land readjustment is to develop and improve urban infrastructure such as road network, river/drainage system, sewerage system and park. The project also provides sites for public facilities, eg. police station, post office, hospital and school. In other words, a local plan could also be implemented by land readjustment.

Problems faced by the state government and local authorities in acquiring land for roads and other facilities can be circumvented by land readjustment.

2.2 Better Economic Use of Land

A land readjustment project can benefit landowners by rearranging their irregular lots into more regular shaped lots. Generally, irregular lots have lower values than regular sites. An area developed with proper amenities is valued higher than an area with poor infrastructure. Therefore, land readjustment not only enhances the value of lots within a project but also enables landowners to utilize their lots more effectively. (See Fig. 1).

Fig. 1 An example of a land readjustment project.



Before land readjustment

After land readjustment

3.0 Key Concept of Land Readjustment

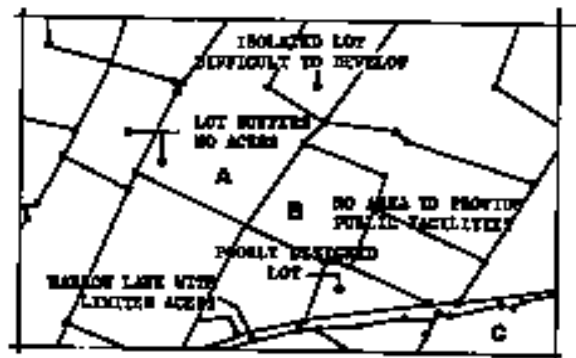
3.1 Replotting

Relotting design is an essential tool in land readjustment. It results in newly designed lots after a project has been developed. They are made to correspond to the original lots before the commencement of the project. (See Fig. 2).

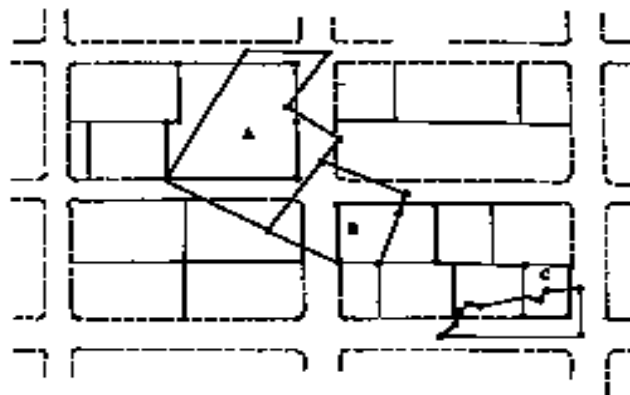
Every lot in a project area is designed as a replot. Even though the replot may have different shape, size and location compared to the original lot, all rights of the original lot are transferred to the replot, that is, each landowner is given a replot based on his original lot.

In general, a replot fetches a higher value than the original lot, even though the acreage of the replot may be reduced.

Fig. 2 Concept of Replotting



EXISTING SITUATION



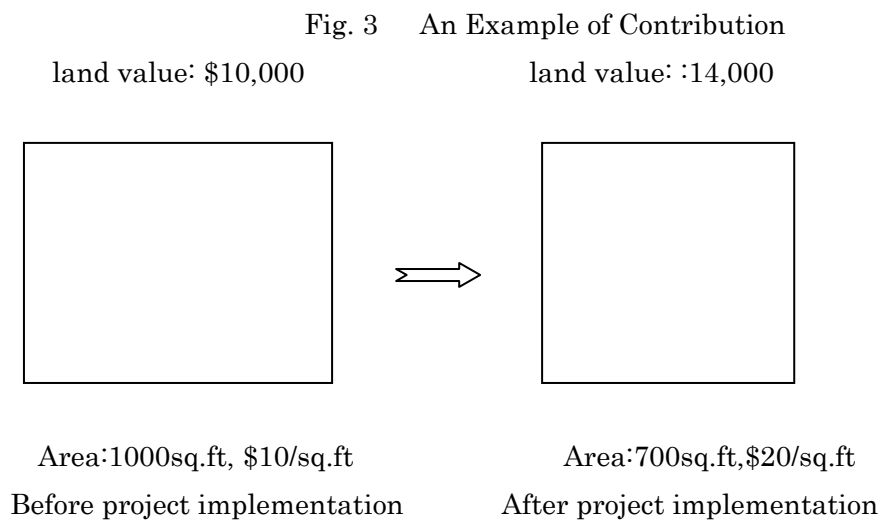
READJUSTED

AFTER REPLOTTING EXERCISE

3.2 Contribution

The theory on contribution is important in land readjustment. The original terminology in Japan is 'genbu' and the direct translation is 'to reduce land'. Every landowner in a project area has to contribute part of his land towards the provision of infrastructure, amenities and financial land.

However, even though a landowner has to contribute part of his land, he benefits more in terms of land value. For example, a landowner has to contribute 30 per cent of his land for the development of the project but the land value of his replot may double, later thus resulting in a net gain of 40 per cent (See Fig. 3).

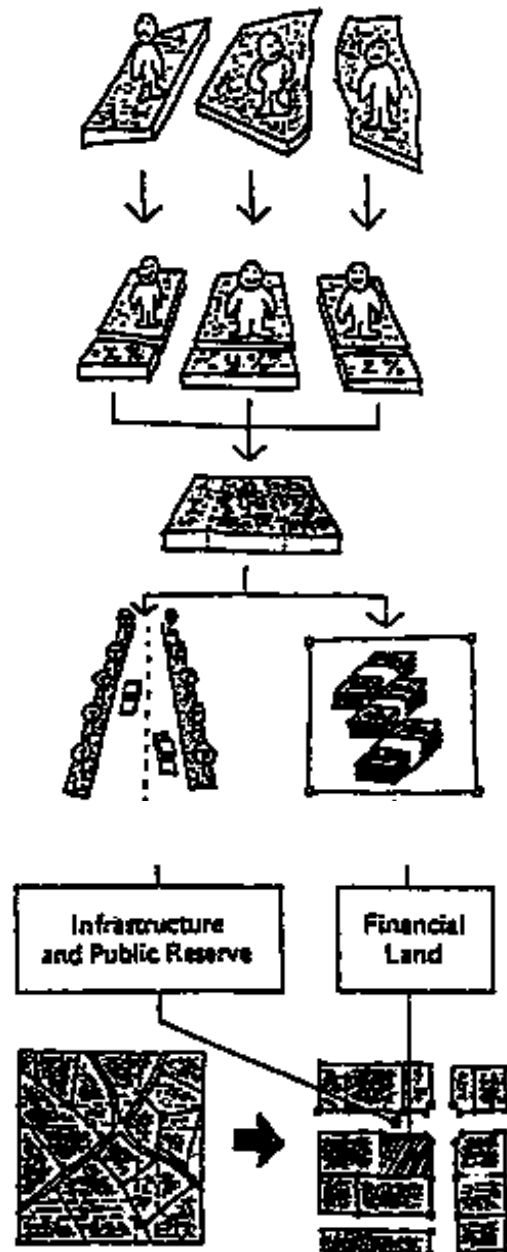


3.3 Financial Land/Reserve Land

Before the introduction of financial land, every landowner has to pay his share of the project cost with cash. Some poor landowner could not pay. Therefore, a financing system was developed whereby instead of cash each landowner contributes a proportionate area of his land for the purpose of offsetting the implementation cost. The land which land owners contribute towards the project is called financial land.

There are two types of contribution: contribution for public land is called public contribution and contribution for financial resource is called financial contribution. (See Fig.4)

Fig 4: Mechanism of Land Readjustment



4.0 MERITS OF LAND READJUSTMENT

4.1 Safeguarding Community Life-Style

If a proposed trunk road is constructed in a village, some residents affected by the proposal would have to be relocated. They will suffer much emotional hardships, even though they are compensated in cash by the implementation body. Besides losing

their friends and neighbours, they will have to move to an entirely new environment. This is a persistent problem in public works which involve land acquisition.

Land readjustment can benefit such residents because the system does not require the landowners to surrender their land entirely. They can still continue to live with their community members in the project area if they agree to contribute a portion of their land for the land readjustment project. (See Fig; 5 Characteristics of Land Readjustment).

4.2 Fair Distribution of Development Charge and Development Benefit

Although land readjustment requires landowners to contribute a part of their land, such contribution is considered as a type of development charge. However, they will instead enjoy a larger development benefit. A mathematical mechanism involving valuation in the design of replot ensures that development benefit and development charge are distributed fairly among the landowners.

For example, let us consider the case of two landowners having the same type of lot where one is given a replot in a residential zone and the other in a commercial zone. Since the commercial replot has a higher value than the residential replot, the contribution from the residential replot is lower than the contribution from the commercial replot. Thus, all development charge and development benefit are distributed evenly and fairly amongst the landowners during replotting design.

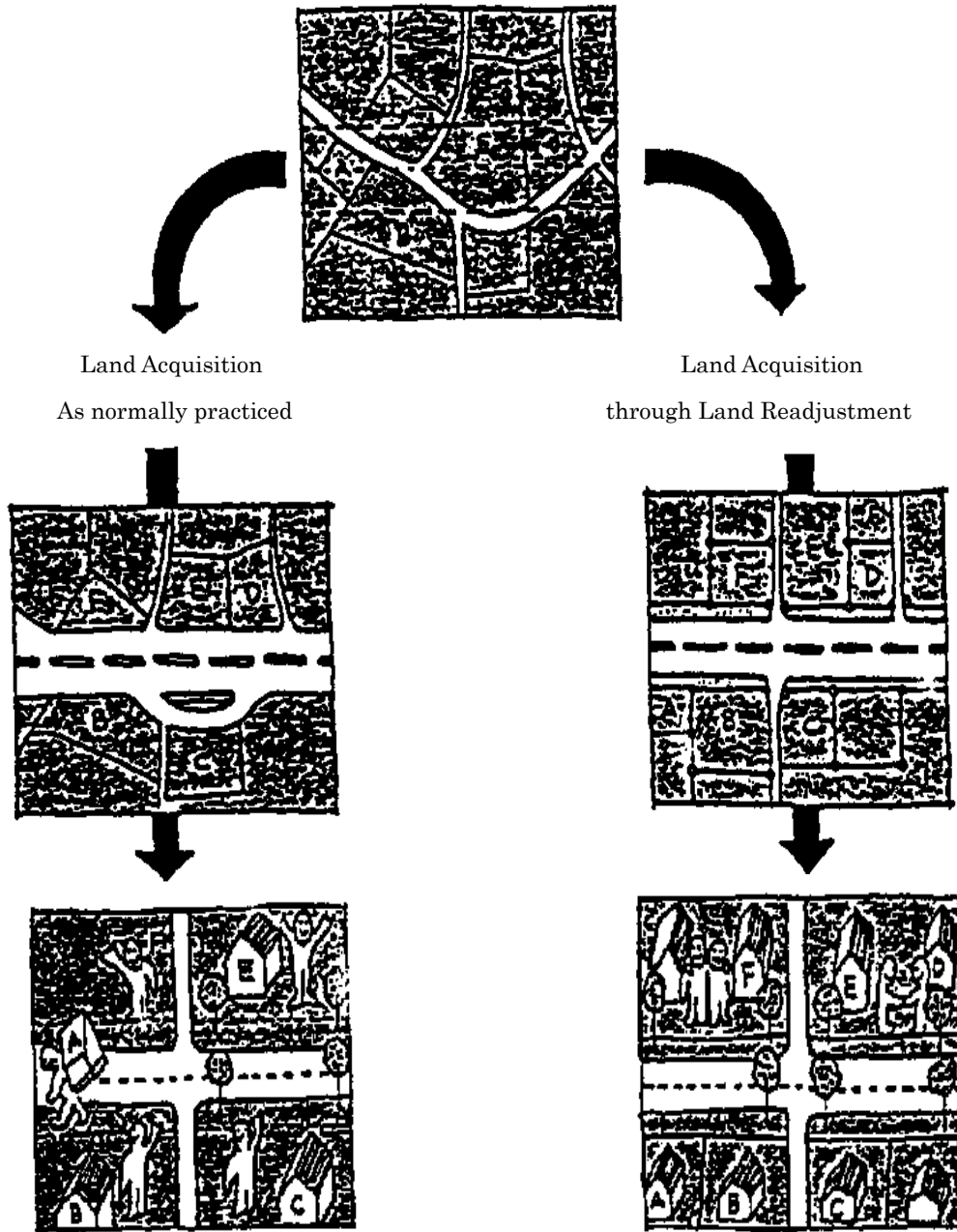
4.3 Low Development Cost

Normally, a developer has to purchase land for the development of a new housing project. In addition, he has to include interest for the loan besides having to spend a huge sum of money for the construction of the urban infrastructure. Therefore, one of the most important tasks for the developer is to secure funds for the project.

However, land readjustment does not require such huge capital outlay because it is not necessary for the implementation body to acquire land in the project area. The cost which the implementation body has to bear is merely for construction and compensation. This means that the capital outlay for land readjustment is less than that for development by the normal process. This mechanism enables landowners to develop their properties by themselves whereby they have to form an implementation body in order to carry out the project.

Fig. 5 Characteristics of Land Readjustment

Existing Project Area with proposed road improvement



After Effects:

After effects:

1. Landowner 'A' has to be relocated.
2. Site utility of many lots become worse off than before.
3. Wasted space occurs.
4. Poor planning of overall area.

After effects:

- I. Landowner 'A' does not need to be relocated.
2. Everyone enjoy improved quality of environment.
3. Better site utility means better land value.
4. No wasted space.

5.0 THE FEASIBILITY OF IMPLEMENTING LAND READJUSTMENT IN OTHER COUNTRIES

5.1 Village Improvements Through The Provision of Adequate Infrastructure

There are still many villages with inadequate infrastructure. The National and State Government have tried to upgrade them by improving the sewerage and drainage systems. If land readjustment can be combined with the upgrading of public infrastructure, the result will be more effective. The relocation of existing houses which obstruct the drain network and construction of new road network to include the new sewerage system can be made possible by land readjustment.

Thus, land readjustment enables village improvement to be carried out in a comprehensive manner.

5.2 Redevelopment of Town Centres

There are many towns with dilapidated urban centres and insufficient facilities. Urban renewal of these town centres will become a priority in many countries in the near future.

It is often difficult for the municipalities or local authorities to redevelop town centres as they involve complexities of land ownership and residents.

Land readjustment can help redevelop such old town centers because the mechanism of land readjustment can apportion development charge and development benefit fairly amongst the public and organizations concerned.

5.3 Development of New Housing Areas

The result and effect of urbanization is the in-migration of people to the towns. Such migration can cause a shortage of housing supply due to a shortage of suitable land for development because of the soaring land prices.

In Japan, land readjustment is used for the development of new housing schemes and some large new towns.

The problem of land in other countries may not be critical yet but in the near future a shortage of suitable land for development can occur. Land readjustment can resolve the land problem for such countries' developers.

6.0 CONCLUSION

Today, many organizations are interested in introducing land readjustment to their countries. Some developing countries had adopted land readjustment techniques for slum clearance and upgrading or improvement of poor infrastructures. Some

developed countries are considering applying land readjustment for reviving unsuccessful resort areas and redevelopment of old town centres.

ASEAN nations are eager to introduce land readjustment in their countries. Indonesia has succeeded in implementing some small land readjustment projects.

Although the concept of land readjustment is simple and logical, the training of administrative personnel in the organizations and also cooperation from landowners are required for its successful implementation.

APPENDIX

1.0 Relationship Between Development Charge and Development Benefit

In the normal development projects in Japan, development benefit could be derived from development project but the developer has to pay development charge to the local authority. On the other hand, land readjustment project can also give a lot of development benefit to landowners in terms of improved environment and increase land value. At the same time the land contribution in land readjustment is a type of development charge. In Japan most landowners in any land readjustment project would prefer to incur less land contribution so as to gain a larger replot. Therefore, it is difficult for the implementation body to propose a larger contribution ratio to the landowners.

Although replotting design identifies each replot's shape, size and location, it can also distribute development benefit and development charge fairly to the individual lot because the replotting design mechanism involves valuation.

2.0 Additional projects by development benefit

The Land Readjustment Act of 1954 involves a unique article which enables the implementation body to build many kinds of public facilities and to manage them(Article 2-2). The main purpose of land readjustment is to build/improve urban infrastructure; roads, parks and drainage. The implementation body can built water supply system an gas pipe network and so on by this article.

In practical works, the implementation body of land readjustment pays the cost of construction for such facilities to the water authority and the gas company. The resource is by selling reserve/ financial land.