

Land Readjustment – A Win-Win-Strategy for Sustainable Urban Development

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SUMMARY

Because a sustainable urban development cannot usually be reached within the existing plot boundaries, it often requires a total change in the situation of the land ownership. Voluntary arrangements might fail in many cases, because of very different interests of the individual landowners.

Many countries use classic instruments like compulsory purchase or expropriation for urban development. But those instruments often cause the resistance of the landowners who do not want to lose their plots. Controversial negotiations, irregular demands on compensation as well as longsome court proceedings can follow. Those effects might cause an extreme delay in realisation of sustainable urban development.

More than 100 years ago Franz Adickes, the previous Lord Mayor of Frankfurt am Main, created a law to force landowners to participate in so called land readjustment projects. The basic idea of this instrument is to exchange the plots of the landowners and not to expropriate them. The municipalities get the areas needed for public use, that can be extracted from the whole project area as a kind of land decrease. The net building land will be redistributed to the previous landowners. So they can either build on their building plots or sell those on the free land market.

Some actual case studies show the benefits of this win-win strategy. The land value increase from agricultural land to building land can be divided between landowner and municipality. The costs of urban development can be financed (at least partially).

This method means no financial risk for the municipalities, because they do not have to purchase and finance the original plots. Because land readjustment is just a plot exchange method, there is also no problem with privatisation of the new plots with all those risks included. In addition there will be no land purchase tax neither for the landowners nor for the municipalities in land readjustment project. And if this instrument of sustainable urban development is implemented well, a partnership between landowner and municipality can be reached. The land readjustment method can be implemented for urban development as well as for urban redevelopment projects.

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1. PLANNING AND LAND OWNERSHIP

Sustainable urban development means "improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden on future generations. (Urban21 Conference, Berlin, July 2000). Important instruments to reach that kind of sustainable urban development are urban planning and policies based on the principles of sustainability.

But urban planning is just the first step towards sustainable urban development. At least same importance has to be given to the realisation of the urban plans, because plans without realisation are just ideas on a piece of paper. In particular in those cases where many different landowners are involved in a project area its realisation is a great challenge.

2. TRADITIONAL METHODS

According to the Planning Laws of the individual country the most common way to realize urban development plans seems to be compulsory purchase (expropriation) of the whole project area or at least of those plots, that are needed for public use. But there are a lot of risks within this classical method. Controversial negotiations, irregular demands on compensation for the expropriated plots as well as longsome court proceedings can follow.

3. LAND READJUSTMENT

3.1 Origin

In Germany there is a more than 100 years tradition in realizing those urban development plans with a formal procedure called land readjustment. The man who influenced the law very much was Franz Adickes, the previous Lord Mayor of the City of Frankfurt am Main. The law that was enacted in 1902 and amended in 1907 is therefore called 'Lex Adickes'. The actual legal basis is the German Federal Building Law Code (Articles 45 – 79).

3.2 General Idea

The general idea of land readjustment is the exchange of the plots in the project area. That means that in land readjustment there is no land acquisition by the municipality or by an investor and therefore there is neither an intermediate finance nor a risk in reprivatizing the building plots. The general way is that all plots within the project area have to be added together to a so-called land readjustment-mass. But this happens only in the way of calculation, not by creating one plot within the total project area.

Out of this total land readjustment mass all areas designated in the urban development plans for public facilities, such as roads, spaces for car-parking, public green spaces, children's playgrounds etc. can be excluded and allocated to the municipality. The remaining mass is the so-called redistribution mass. Even those areas, that are needed for other public use like kindergarten, school, cemetery etc. can be given to the municipality or any other public agency, if they are able to contribute suitable alternative land, which also may be located outside the land readjustment area.

The so called redistribution mass, what is the net building land, has to be redistributed to the original landowners. There are two different criteria to redistribute the building land to the original landowners: the relative size or the relative value of their former plots. That means that those landowners who owned a greater part of the original project area will receive a greater part of the new (building) plots.

3.3 Redistribution by Relative Size

In those projects where the criteria of redistribution by size is chosen, up to 30% of the private old plots can be taken for public use without paying any monetary compensation. I would like to give an example:

Landowner Mr. A had a plot of 1000 m² of agricultural land. The municipality is allowed to take up to 30% that means 300 m² to be contributed to the public areas according to the designations of the detailed urban development plan. So landowner Mr. A receives a building plot with 700 m² without any additional monetary compensation. If it is only possible to redistribute a building plot of 800 m² to Mr. A he has to pay an additional monetary compensation for the area he got more than his calculated claim. That means he has to pay the actual market value for the additional 100 m².

3.4 Land Evaluation and Redistribution by Relative Value

As mentioned before, there is another way to redistribute the building land in a land readjustment project: the relative value of the former plots. This method is a little bit more complicated than redistribution by size. I would like to give an impression what is going on in land readjustment by value. The main idea is to share the benefit by urban development between landowner and municipality. The landowners get the gain caused by land value increase by planning (from agricultural land to potential development land). The municipality absorbs the land value increase caused by land readjustment itself, that means the land value difference between potential development land and building land. Basis of the determination of the individual land values are the market values.

To make it more concrete I would like to balance this kind of land readjustment by land values:

Before the start of planning and land readjustment project landowner Mr. A has an agricultural plot with 1,000 m².

The agricultural market value can be about 1,000 m² * 5 €/m² = 5,000 €.

But the input value for landowner Mr. A in land readjustment project could be

$1,000 \text{ m}^2 * 200 \text{ €/m}^2 = 200,000 \text{ €}$.

That means that landowner Mr. A has a profit of $200,000 \text{ €} - 5,000 \text{ €} = 195,000 \text{ €}$.

The landowner Mr. A may get a building plot with a size of 600 m^2 in land readjustment project.

This represents a land value of $600 \text{ m}^2 * 350 \text{ €/m}^2 = 210,000 \text{ €}$.

In this case of receiving a building plot of 600 m^2 landowner Mr. A has to pay an additional monetary compensation of $210,000 \text{ €} - 200,000 \text{ €} = 10,000 \text{ €}$.

So the municipality gets 400 m^2 of Mr. A's former plot as well as a monetary compensation of $10,000 \text{ €}$.

The following chart summarizes these explanations:

Mr A	Size	Value (€/m²)	Value (€)
agricultural plot (before planning and land readjustment)	1,000	5	5,000
Input value (at the beginning of land readjustment project)	1,000	200	200,000
Benefit			195,000
Building plot (result of land readjustment project)	600	350	210,000
Contribution ($1,000 \text{ m}^2 - 600 \text{ m}^2$ and $210,000 \text{ €} - 200,000 \text{ €}$)	400		10,000

General Balance

So all in all landowner Mr. A as well as the municipality have their benefits with this kind of urban development. Landowner Mr. A gets a building plot instead of his former agricultural land. The municipality gets the public areas for roads, parks etc. without paying anything for it and can realize the planned urban development of the project area.

But there is also a great variety of possible different results for landowner Mr. A within the land readjustment project. If he prefers to get more building land, this can often be realized, but Mr. A has to pay a higher monetary compensation according to the market value.

Example: If he gets 800 m^2 of building land, this represents a market value of $800 \text{ m}^2 * 350 \text{ €/m}^2 = 280,000 \text{ €}$.

That means landowner Mr. A contributed only 200 m^2 , but he has to pay:

$280,000 \text{ €} - 200,000 \text{ €} = 80,000 \text{ €}$.

Another result could be:

Landowner Mr. A prefers to get a smaller building plot of for instance 400 m^2 .

That means his building plot represents a market value of $400 \text{ m}^2 * 350 \text{ €/m}^2 = 140,000 \text{ €}$.

Then landowner Mr. A will receive an additional monetary compensation of $200,000 \text{ €} - 140,000 \text{ €} = 60,000 \text{ €}$ from the municipality, but he contributed an area of 600 m^2 .

A fourth (and extreme) result could be: If landowner Mr. A does not want to get a building plot, the municipality can pay him his input market value of the potential development land with an amount of $200,000 \text{ €}$ and gets his plot. But this result should usually only be reached if another landowner agrees to get more building land than he usually has to receive. Otherwise landowner Mr. A should accept the redistribution of a building plot, that he can sell after the completion of land readjustment procedure on the free land market.

Mr A	Size (m²)	Contribution (m²)	Value (€/m²)	Value (€)	Financial Compensation (€)
Building plot	800	200	350	280,000	80,000
Building plot	400	600	350	140,000	- 60,000
Without land redistribution	0	1,000	200	200,000	-200,000

Alternatives

And there are two more options of redistribution for landowner Mr. A If he agrees he can receive common landownership of a plot or a plot outside the land readjustment area, as well.

3.5 Organization

In Germany the responsibility for all important decisions in land readjustment project is transferred to independent land readjustment boards appointed by the municipalities. That means that a municipal office prepares all decisions and negotiates with all the landowners of a land readjustment area. But the final decisions will be made by the independent land readjustment boards. Those boards usually exist of five persons: a lawyer, a land evaluator, a land surveyor and two members of the local parliament.

3.6 Participation

An important aspect in land readjustment project is the participation of the landowners. As I mentioned before, land readjustment has to realize the detailed urban development plans. Already in this planning process there is a two-step-participation of the citizens. But in land readjustment project there is a much more intensive participation of all landowners and other parties involved. Within intensive negotiations the general principles of land readjustment, the market value of the landowners input plots, their claims and different options of land redistribution have to be discussed. After the land readjustment board has decided the land readjustment plan the landowners get the relevant extracts of this plan.

3.7 Procedure

This is just a description of the general steps of land readjustment procedure. Based on the regulations of the Federal Building Law Code the local parliament has to decide on the general introduction of a land readjustment project. In this early stage there should be a general information for all landowners within a meeting to introduce the project, its rules and its procedure. Then the land readjustment board decides the specific land readjustment resolution designating the concrete land readjustment area and specifying the individual plots within the land readjustment area. This decision has to be published. From this decision there is a prohibition on disposition and development freezes in the land readjustment area. That means that all important actions (like selling the plot, subdividing a plot, erection of physical structures) within the land readjustment area are allowed only with written permission of the land readjustment board.

Within individual negotiations with all landowners their wishes and possibilities of redistribution have to be examined and with these results a draft of the land readjustment plan can be designed. The land readjustment office can try to get agreements of the landowners to use those parts of their actual plots that are needed for the construction of the roads. If the land readjustment department succeeds to get those agreements, the municipality or any other agency charged with providing local public infrastructure can start with the construction of the sewerage and the roads. If a landowner denies his agreement the land readjustment board can force him by putting the municipality in possession prior to completion of the land readjustment plan.

After having designed the draft of the land readjustment plan and after an additional individual discussion with the landowners the land readjustment board has to decide on the land readjustment plan. This plan must indicate the new utilization proposed, stating all actual and legal changes of the plots within the land readjustment area. The land readjustment plan comprises the land readjustment map and the land readjustment inventory. The decision has to be published by public notice again and relevant extracts of the land readjustment plan have to be sent to the landowners and parties involved. If there are no objections against the land readjustment plan, the land readjustment board has to publish the date upon which the land readjustment plan became infeasible. With the issuing of public notice the new plots replace the old ones.

Afterwards the rectification of the public registers and the payments have to be made, while the municipality is both creditor and debtor of the payments. There is no land purchase tax neither for the landowners nor for the municipalities in land readjustment project.

If a landowner contradicts a decision of the land readjustment board, he can institute legal proceedings. If the situation is very complicated and landowner and municipality cannot accept the judgement, the final decision will be made by the Federal Court of Justice.

4. PROJECT EXAMPLES

Some case studies will be shown within the presentation of this paper including

- a land readjustment project for urban development
- a land readjustment project for urban redevelopment and
- an example for landowners participation

5. CONCLUSION

Land readjustment is a very elegant and economic instrument to realize urban development plans. This method of land exchange means no financial risk for the municipalities, because they do not have to purchase and to finance the original plots. Because land readjustment is just a plot exchange method, there is also no problem with privatization of the new plots with all those risks included. The land value increase from agricultural land to building land can be divided between landowner and municipality. The costs of urban development can be financed (at least partially). And if this instrument of sustainable urban development is

implemented well, a partnership between landowner and municipality can be reached and guarantees a great benefit for both landowner and municipality.

BIOGRAPHICAL NOTES

Mr. **Rainer Müller-Jökel** graduated as a land surveyor from the University of Bonn, Germany with main subjects concerning land management and land evaluation. He is working for the Municipal Survey Office of Frankfurt am Main as Head of the Department of Land Readjustment.

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