

The Potential Power of Land Funds

– A déjà vu of Dutch history in current Central Europe

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ABSTRACT

Besides all the problems frustrating Central European land markets and solutions for fragmentation, there is one important asset: Land Funds. Their potential is widely acknowledged, but details on the actual use prove to be hard to fill in. Reviewing the history of the Dutch polders, similarities are striking. This paper uncovers the valuable Dutch experience in order to be of benefit for Central Europe. It gives a comparative analysis of the Dutch experience and the Central European potential on Land Fund application. The paper stresses the importance of context-instrument relationships. Both the Dutch and the Central European case are described and the similarities and differences are analysed.

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1 INTRODUCTION

Besides all the problems frustrating Central European land markets and solutions for fragmentation, there is one important asset: Land Funds. Land Funds are significant amounts of land, more or less directly controlled by the government. They have a great potential for solving problems of farm structure. The potential is acknowledged, but details on the actual use prove to be hard to fill in.

Reviewing the history of the Dutch polders, similarities are striking. The polders, fertile land reclaimed from the sea, meant a considerable enlargement of the available agricultural area. The polders were free from use rights and state controlled. The four polders were completed one at a time over a period of 60 years. In that period, applying these land funds showed versatility under ever changing economic and sociological conditions. It is generally considered to have been crucial in the development of Dutch agriculture.

Despite its promising potential, the Land Fund concept is sadly ignored in scientific literature. Neither the Central European opportunities, nor the Dutch experience are enclosed to an international public. This paper is an attempt to fill this gap, and thus prove that Central European ideas on Land Funds are not unprecedented, as is often assumed. It gives a description of the Dutch practice on land banking application and an overview of the Central European opportunities. It reveals context-related issues of (1) who is eligible acquiring Land Fund land, (2) the eventual ownership distribution and (3) the design of the parcelling.

2 THE BASIC PRINCIPLE OF A LAND FUND

In essence, Land Funds help to overcome a key constraint on agricultural land tenure. Namely, in densely populated rural areas, all farmland is bordered by other people's private land or by little productive land. This means that expanding the farm of one person inevitably means reducing of property of others. The fact that land is finite (see Dawson, 1986) discerns it from other means of production. This fixed supply does not block an optimal distribution of land among the most efficient users, however. The farmer that has the best possibilities of exploiting the land should still be able to acquire land from less efficient users. But a second particularity of land, namely the high transaction costs, can outweigh the difference in exploitation efficiency. And even then, non-economic considerations can resist the transfer from one landowner to another. Emotional bonds to land or farming as a profession may play a role and so may the lack of alternative income.

Thus, transaction costs and non-economic considerations can make the land market within a certain area far less dynamic than differences in efficiency would suggest or require. Economic and non-economic forces define an equilibrium in which no transactions are made.

TS8.4 Economical Aspects of Planning and Implementation

2/15

Terry van Dijk

The Potential Power of Land Funds – A déjà vu of Dutch history in current Central Europe

In fact, the only dynamic might be demographic; the termination of farms due to the failing of a successor exploiter. This way, the effective and autonomous adaptation of farm size to economic requirements fails.

The deadlock can be avoided by introducing a new type of player in the land market; an owner that is not interested in growing but in distributing its land to established farms. Its land is thus used as a buffer that enables the improvement of farms without intersecting other peoples' interests. The buffer may also be used to establish public facilities, like drainage and road infrastructure. The use of such a buffer is referred to as 'land banking'. The buffer itself is a Land Fund.

The buffer can be the subject of agricultural policy. By giving the government influence on the criteria for assigning Land Fund parcels, policy on farm structure can be implemented. This way, policy does not have to manipulate private actors, but can more directly change land ownership relations within a certain area.

The possibilities of applying land banking depend on the degree of concentration of the Land Fund. At the one end of the continuum, there are the vast, clustered amounts of land. In Poland, for instance, an enormous reserve is on sale. It concerns the zone that was formerly German land and used by state farms until 1990. It is not assigned as a Land Fund, but could potentially be used as one. Other Central European governments hold dismantled collectives or former military training areas.

The below described experience on polders shows that using concentrated Land Funds for farm structure improvement means that the new users will have to move to that particular area. This may involve large distances and consequently meet social barriers. Furthermore, the area probably is initially not suited for private farming. So, entirely new infrastructure and building will have to be built. All this can frustrate the redistribution of Land Fund land. It can, however, be the only way to relieve severely overpopulated regions.

At the other end, there are the diffuse Land Funds, consisting of numerous parcels scattered throughout the country. The advantage of the diffuse type is that the buffer is at short distance from the farms that need it. Thus, established farms can stay in place while enlargement is still possible. Investments to make the parcels attractive for farmers are hardly necessary in this case.

3 DUTCH EXPERIENCE ON USING CONCENTRATED LAND FUNDS

The Zuiderzee-works, which were officially started in 1918, included building four polders: the 'Wieringermeer', the 'Noordoostpolder', 'Flevoland' and the 'Markerwaard'. This way, the Dutch government was going to obtain approximately 200,000 hectares of agricultural land. Although the polders had all characteristics of a Land Fund, the polder-land distribution took place at a time completely different from the present.

The experience can still be valuable today, since it did not take place at one moment in time. The distribution of polder-farms started in 1934 and ended in 1992. During that time,

enormous changes took place in agriculture and in the society as a whole. This enables us to understand the flexibility and versatility of Land Funds, and to be inspired by the solutions found for the ever-changing application context. This section shows how the policy towards the use of polders changed, what questions were raised while designing the polder and how both effected the farming structure that was established. The information mainly comes from an extensive analysis by Schimmel (1987), unless indicated differently.

3.1 The Wieringermeer

The Dutch government was advised about the profitability of building the first polder in the project by a commission in 1924. Effort was made to modernise and become more competitive. The Wieringermeer polder had to become a role model for rational agriculture. Another important consideration was that due to the growing rural population, agricultural land had become scarce. All in all, the most important advantages of building the Wieringermeer were (1) a better balance in land prices and productive value, (2) a higher level of self-sufficiency, (3) a raise of export and (4) raise in wealth. As the cost estimates increased, some negative turnover on the project was regarded acceptable, taking into consideration the nation-wide indirect advantages of the project. Long before the polder was ready for production, the planning of the to be landscape took place. For the Wieringermeer, the agricultural interests clearly prevailed. Out of the 20,000 hectares in the polder, only 2,000 were eventually designated for non-agricultural purposes. The soil condition did not frustrate this priority at all. In order to ensure optimal farming, a grid of rectangular intersecting roads and canals was designed.

Being the first polder, the Wieringermeer design encountered principal dilemma's that kept recurring in the other polders. Before designing the parcelling, the principal question was raised whether to distribute large farms (in order to ensure a wealthy farmers population) or smaller farms (thus alleviating the land-hunger of the existing small farmers). The then occurring crisis, especially coming down hard on the small farms, led to a preference for larger parcels. The fear of creating not viable farms clearly outweighed the advantage of getting people to work. Also financial aspects may have been involved: on balance, large farms mean less farm buildings, thus reducing costs.

The parcelling design itself faced one certainty and one dilemma. The certainty was that a 20 hectare parcel would be optimal since the projected farms measured a multiple of 20. The dilemma was that the shape and accessibility were a trade-off between construction costs and exploitation costs. A dense road and water infrastructure would mean high costs and loss of productive areas, but would save the farmer time and money. It was hard to choose from the alternatives, since the construction costs were short-term and on account of the government while the exploitation costs were long term and on account of the farmers. In the end the decision was made to apply two types of parcelling. The one type (measuring 1200x500 metres; 60 ha) had a canal along each long side and road along one narrow side. The other type (measuring 800x250 metres; 20 ha) had one road and one canal on each of the narrow sides.

Sale of Land Fund Land	
<i>Pro:</i>	<ul style="list-style-type: none"> ▪ The state should not own more land than required for administrative tasks. ▪ The state is not suited for administrating this properties. ▪ An owner-user population is likely to stimulate sound social and economic life in the polder. ▪ Sale would unburden the state.
<i>Con:</i>	<ul style="list-style-type: none"> ▪ The state would loose control. ▪ Future raises in land value would be missed out. ▪ When land would be used as an investment, uncertainties may negatively influence the farmers' attitude.
State exploitation	
<i>Pro:</i>	<ul style="list-style-type: none"> ▪ Construction takes place on accounted of the civilians' tax money, therefore the civilians should retain control through the parliament. ▪ The best managers can be selected. ▪ The employees will receive a constant wage, and thus will the municipalities be ensured of constant tax incomes. ▪ The government will gain from the profits made. ▪ Starting private farmers may relatively soon go bankrupt
<i>Con:</i>	<ul style="list-style-type: none"> ▪ State exploitation lacks the incentive for employees to give their most. ▪ The system holds a danger of bureaucracy. ▪ Best managers may also be attracted through other types of land use.
Tenure	
<i>Pro:</i>	<ul style="list-style-type: none"> ▪ Tenure enables switching to another type of land use in a later stadium. ▪ Tenure facilitates the settlement of farmers from all social ranks
<i>Con:</i>	<ul style="list-style-type: none"> ▪ The bond between the farmer and his land is weak (<i>depending on the level of tenant protection</i>). ▪ The tenant does not receive payments for improvements to the farm. ▪ Setting a realistic tenure-fee can be difficult.
Heritable tenure or long lease	
<i>Pro:</i>	<ul style="list-style-type: none"> ▪ The land user has a long lasting right of use, resulting in a strong bond between farmer and his land. ▪ The farmer needs less capital in comparison to sale. ▪ Raise in land value is expressed in the lease price, giving the government the possibility to profit. ▪ The government stays in control.
<i>Con:</i>	<ul style="list-style-type: none"> ▪ The tenant has less capital than an owner. ▪ Heritable tenure may be rejected because people are unfamiliar with it. ▪ The government partly loses control. ▪ Changes in legal type of land use are hard to make. ▪ It will be hard for people from outside the area to acquire land.
Four different legal types of land use in which land funds land can be distributed, together with their pros and cons. Source: Schimmel. 1987	

Besides the physical characteristics described above, also the legal characteristics on land posed dilemma's to the design of the Wieringermeer polder. The extent of the rights that would be given to the newly settled farmers could vary from full ownership through sale, extensive tenancy rights through heritable tenure or would they be given normal tenancy. The government could even consider cultivating the land in a state company. The textbox shows four types of land use together with their pros and cons.

In order to choose the most suited type of land use, criteria were set. At that moment it was regarded essential that:

- Farmers would feel a strong bond with their land
- The government stays in control of the land
- Even financially weaker applicants should be able to colonise the polder
- The government would be able to profit from future raises in land value

Sale and state exploitation were rejected on these grounds. Heritable tenure was regarded the best type, but for the first years, in which the soils had not reach full productivity yet, tenure would be applied. Parliamentary debates eventually led to the choice to apply all four types of land use, since the Wieringermeer was more a pilot for the rest of the project. The final situation deviated significantly, however. The area used for state farms was lowered to 1,000 ha after amendments concerning use and necessity of the concept. Also, the size distribution just after the establishment of farms deviated from the planned 20 to 60 ha range. The upper deviation resulted from governmental farmer support related to the 1930 crisis. The downward deviation results from small farms given to the polder-pioneers that helped making the polder and preparing the soil for cultivation. All private farms were given in tenure, according to plan. But warfare and subsequent post-war issues soon led to other priorities.

The tenure arrangements have always stayed in place.

	<i>Number</i>		<i>Average size</i>
<i>Private farms</i>	513	<i>of which:</i>	32 ha
		23% < 15 ha	
		23% ranging from 15 to 30 ha	
		18% ranging from 30 to 40 ha	
		23% ranging from 40 to 50 ha	
		12% > 50 ha	
<i>State farms</i>	38		

Wieringermeer farm structure, 10 years after all land was distributed. Source: Schimmel, 1987

3.2 The Noordoostpolder

Because of the 1930 situation, the estimations on the construction costs of the Noordoostpolder assumed that labour costs were low. Since the number of unemployed was alarmingly high, the project could create new employment opportunities. And because both unemployment support and wages had to be paid by the government, only the difference between these two would mean additional costs for the government.

The parcelling design was influenced by the new developments in motorised traffic on land. Water infrastructure, that was important in the Wieringermeer, was decreasing in importance. The Wieringermeer 60 ha parcel-type was rejected for these reasons. The standard for the Noordoostpolder became a 24 ha parcel, measuring 800x300 metres, with one road and one canal at each of the narrow sides. By splitting up and merging parcels, various farm sizes could be made, differing only 6 hectares in size.

Like in the first polder, politics had to decide what farm size structure was preferable. The promise to the people who had been working in the constructing of the polder, namely to receive their own farm, had to be met. Because these workers typically lacked sufficient capital, the pioneer-farms had to be relatively small (12 to 18 hectares). And there was second group that would colonise the polder in small farms. This group existed of farmers from problematic areas. In a region called Walcheren and in Dutch sandy soil regions in general, overpopulation was very bad. By offering these farmers new opportunities in the Noordoostpolder, these regions would be relieved from overpopulation and consequently improve in farm size structure. Like the polder workers, the Walcheren and sand-soil farmers

lacked capital, thus needing relatively small farms. For the rest of the polder there were also social reasons for creating small farms.

The government decided to initially distribute the land under tenure contracts. State exploitation was planned for 2 of 3,000 hectares of land, for which a number of research goals were formulated. The definite type of land use from then on was subject to intensive debate. Again, criteria were formulated that were assumed important at that point in time. They were not very different from the criteria for the Wieringermeer.

The ministers argued that heritable tenure would be ideal. Nonetheless, also tenure was to be applied to an important extent in order to give applicants with little capital a chance. The drawbacks on tenure that existed during the distribution of the Wieringermeer-parcels were no longer valid. Namely, in the mean time important changes had been made concerning the legal status of the tenant. Legal maximum prices and the right of pre-emption were the most important improvements. Eventually, not a single farm was established on the basis of heritable tenure.

	<i>Number</i>				<i>Average size</i>
<i>Private farms</i>	1801	<i>of which:</i>	10% measured 7 ha	7% measured 30 ha	25 ha
			20% measured 12 ha	7% measured 36 ha	
			11% measured 18 ha	2% measured 42 ha	
			34% measured 24 ha	9% measured 48 ha	
<i>State farms</i>	71				28 ha

Noordoostpolder farm structure, just after all land was distributed (in 1963). Source: Schimmel, 1987

Because the Noordoostpolder had an important role in the improvement of overpopulated regions, a new dilemma arose. The unexpected large interest in Noordoostpolder parcels required a clear selection procedure. For the first 45 farms that were distributed, 190 people applied. The following years showed a ratio of 3,000 applicants on 150 farms. Selection criteria were age (26-51 years), good reputation, theoretical and technical skills and financial requirements. Eventually 1,801 farms were distributed. The Noordoostpolder eventually mainly served to alleviate problems in other Dutch regions. Out of the 1,356 applicants that had received a farm by 1957, 83% belonged to a special group having suffered damage or coming from a problematic region.

3.3 Eastern Flevoland

In Flevoland (total size 96,400 ha, but constructed in two halves), non-agricultural land use would consume more space than in the other polders, in spite of the soil types all being suited for agriculture. Societal developments, for example rapid growth in mobility and leisure time, claimed their share of the available space. Also, these developments were so fast that they kept outdating the plans. Even the spatial plan explicitly aimed at being flexible to adapt to future developments. In 1957, still 84% of the polder area were designated to agriculture. The actual situation in 1979 contained 73% of agricultural land and by the late eighties this was down to 67%. Within this time, the space reserved for nature and outdoor leisure rose from 5% to 17%. For the first time in history, highly productive clay and loam soils were sacrificed for nature and leisure.

The projected farm size distribution was subject to a similar discussion as in the case of the first two polders. The dilemma was even bigger, however. The problems of overpopulated regions were now more urgent, whereas the minimal size for what was likely to be viable had risen. The last development resulted from the surpluses on the European market, negatively influencing consumer prices. The farm distribution was co-ordinated through an annual scheme.

	<i>Applicants per adverted farm on average</i>	<i>Participants in land consolidation schemes</i>		<i>Those that suffered damage</i>		<i>Those without a special reason</i>	
		<i>Applications</i>	<i>Sustained</i>	<i>Applications</i>	<i>Sustained</i>	<i>Applications</i>	<i>Sustained</i>
1963	11.0	339	64	274	30	1,590	29
1964	20.4	273	45	263	21	1,508	30
1965	17.4	123	41	148	20	1,136	20
1966	20.9	234	34	174	19	1,116	18
1967	20.7	239	31	128	13	857	18
1968	23.4	269	28	174	15	915	17
1969	21.4	292	29	244	14	726	14
1970	23.7	160	15	152	9	399	7
1971	21.6	142	14	114	9	370	6
1972	19.8	67	13	82	7	345	8
1973	29.7	143	10	105	5	346	3
1974	27.0	182	12	132	7	361	4
1975	28.8	144	11	128	7	333	6
1976	33.4	124	7	114	4	163	3
<i>Total</i>	18.4	2,731	370	2,232	186	10,165	188
<i>%</i>		18.1	50	14.8	25	67.1	25

Interest in Eastern Flevoland farms and the actual annual distribution of farms. The interest is calculated per farm that was announces for distribution, a number that deviates from the actual distributed numbers. Source: Van Dijk, 1979

Because solving the problems in other regions was accepted as one of the goals, the choice was made to designate 50% of the land to farmers in land consolidation schemes, 25% to farmers damaged by projects for the common cause and 25% to all interested farmers not belonging to the former two groups. The applications not at all resembled the projected distribution. Two thirds of in total 15,000 applications were filed by farmers who did not belong to the groups of special importance. Again, selection of the applicants was necessary. The criteria hardly differed from those used in the Wieringermeer and Noordoostpolder. However, the financial requirements were higher than in the other cases. In the end, the projected distribution among interest groups was exactly according to plan.

Those that came from land consolidation schemes were allowed a maximum increase in farm size by one third. In reality, the 370 farms that moved to the polders left behind 11,905 hectares and received 15,170. This means that they gained 27% on average, indicating considerable interest in farm expansion. Distributing land to those that suffered damage, for instance by urban development or new infrastructure, meant an important save on expenses. The space required for public causes could this way be obtained more easily and relatively cheap.

The actual legal types of ownership that were established were mainly tenure and heritable tenure. Around one third of all distributed farms had a heritable tenure contract, while the rest was given in regular tenure. Only two farms were directly given in ownership. As for the ratio between tenure and heritable tenure; the proportion heritable tenure grew during the process from 21% to nearly 60%. The long debated but by then still fairly unknown type gained more and more support. However, the extreme raise in the market price for the heritable tenure rights led to a more restricted policy in later years.

		<i>Number</i>		<i>Average size</i>	
<i>Private farms</i>	777	<i>of which:</i>	11% < 30 ha	<i>farming:</i>	6 % of the polder
			61% 30-50 ha		52%
			23% 50-70 ha		30%
			5% >70 ha		12%
<i>State farms</i>	33				

Eastern Flevoland farm structure, just after all land was distributed (in 1976). Source: Schimmel, 1987

3.4 Southern Flevoland

In the creation of the southern part of Flevoland, two important differences in comparison to the other polders can be noted. The first is that no calculations were made on the profitability of the construction. The second difference, probably directly in relation to the first, is that in spite of the excellent clay soils, the word 'agriculture' was not mentioned in the goals for Southern Flevoland. The official goals were: (1) space for dwellings and enterprises, alleviating the overcrowded Amsterdam-region, (2) leisure opportunities both on land and on water, and (3) providing in infrastructure complementing the existing routes.

		<i>Number</i>		<i>Average size</i>	
<i>Private farms</i>	137	<i>of which:</i>	8% < 25 ha	(fruit orchards)	no data
			26% 25-45 ha		
			69% 45-65 ha	(mainly arable)	
			4% >65 ha	(all arable)	
<i>State farms</i>	2			(soon to disappear)	

Southern Flevoland farm structure surveyed in 1982, before all land was distributed. Source: Schimmel, 1987

In the parcelling design, the social considerations prevailed the economic ones. In the period until 1987, distributed arable farms measured 55 ha and dairy farms 45 ha, far below the calculated economic optimum of 85 ha. Even smaller farms were allowed when necessary, referring to the positive experiences in the Noordoostpolder, where shifting to specialised crops ensured an income for even the smaller farms.

The decision on the legal type of land use could benefit from the former experience. By then, ownership and heritable tenure had shown problems. Distribution in ownership was unattractive because of the high prices relative to tenure prices. Heritable tenure still held its advantages, as mentioned in the textbox. However, an unexpected side-effect led to objections. Namely, being an alienable right, the market in heritable tenure rights was setting

extremely high exchange prices by that time. And because the heritable tenure contracts were distributed for free, this situation was not acceptable.

Therefore, all land was given in tenure, except in those cases where applicants moving out of land consolidation project insisted on heritable tenure. By 1982, 60% of the farms were tenure farms and 39% of the farms were established under heritable tenure. State farms had proved to be unnecessary and frequently not viable.

4 DUTCH EXPERIENCE ON DIFFUSE LAND FUNDS

Since the polder could not completely solve the fragmentation problems, a diffuse Land Fund was established besides it. Requirements for successful application of a diffuse Land Funds are (1) one central agency, entitled to buy land, (2) that conforms to national structure policy, and (3) that does not disturb the free land market. Dutch land consolidation practice did, and still does, benefit from diffuse strategic reserves. These reserves are administered by the Foundation for Agricultural Land Management (SBL in Dutch). SBL buys land on a strictly voluntary basis. Only in the framework of a land consolidation project, these plots are used to improve the ownership structure. The focus of SBL, facilitating land consolidation (Bos, 1983), was underlined by the integration of SBL as a department of the Land Consolidation Service (CD in Dutch). The Foundation's board consisted of 10 persons, combining agricultural and other interests.

Originally, CD staff was burdened with the tasks that SBL's targets generated (Bos, 1983). The tasks were distributed through the entire organisation until a special department was formed in 1964. After 1968, every province had 1 or 2 SBL officials, supported by a number of acquiritors. The acquiritors, selecting and buying parcels, have always been experts from outside the SBL organisation. Between 1965 and 1973, they acquired some 125,000 hectares and redistributed 60% in the same period. The remainder was needed as a working reserve. Over time, the task of SBL became more important and the broadening scope of land consolidation affected the SBL activities as well. Having strategic reserves was increasingly important to achieve non-agricultural goals in project areas. The reports of newly accepted projects between 1960 and 1965 assumed SBL to buy 1167 ha of arable land, of which 67 ha to be reserved for nature. Between 1970 and 1975 these figures were 10,842 and 3574 hectares (Van den Brink, 1990). Farm enlargement ceased to be an SBL target in 1980 (Van de Kamp, 1994).

The replenishment of the diffuse Land Fund was further stimulated by a subsidy arrangement: the Development and Reconstruction Fund for Agriculture (O&S in Dutch). The fund had two aims: (1) giving financial support to farms that have difficulties to make ends meet, and (2) buying the property of farmers that did not wish to continue their activities (Van den Brink, 1990). The bimodal goal of the fund led to a schizophrenic situation. It gave the fund two rather contradictory roles; the saint and the vulture. In fact, the vulture was part of the original first concept (buying up terminating farms), whereas the saint was part of the compromise made to satisfy the agricultural interest groups. The policies on the expenditures of the Development and the Reconstruction respectively were made by two different working parties.

The Development part of the fund mainly focussed on modernising farm buildings. The criteria for granting subsidies were hard to define, however. There was a fear of attracting unprofitable investments and a further decline of prices for agricultural products. This hesitation may explain why the expenditures of the Development part have been lower than those of the Reconstruction part for the first ten years of the fund.

The Reconstruction aims were met by a series of farm termination subsidies. Farm termination would give space to the remaining farms (thus improving the economic position of the latter) and generate labour for other economic sectors. The main principle was to give the former farmer an allowance until his pension date. The three regulations that have been applied represent a search for the right criteria.

It was a logical suggestion to make SBL the obligatory buyer of the farms on sale. SBL was in a position to use the land of the terminated farms for improving the general farming structure. Moreover, in return for the subsidies, it was reasonable that the government kept some control over the farmland that came on sale through these subsidies. The other option, sale of the land on the free market, may aggravate fragmentation but does not disturb the free market land prices. In the political arena, the monopoly of SBL perished under the pressure of agricultural interest organisations. However, within land consolidation areas, SBL did retain its monopoly and outside the project areas, the subsidy held the restriction that the sale of the farmland must improve the parcelling of recipient farms.

The fund had a considerable impact. In practice, the fund was involved in 21% of all Dutch farm terminations between 1965 and 1975. Of the 78,550 hectares of farmland that was released by these farm terminations, 65% was surrendered to existing farms in the framework of farm enlargement, amounting to an average 2.55 hectares per transaction. Another 31% was sold to SBL that returned it to existing farms in average plots of 4.75 hectares. The remaining 4% was converted into non-agricultural land use, with an average 1.52 hectares per transaction.

5 CENTRAL EUROPEAN CHANCES AND INITIATIVES

Currently, Central European agriculture is suffering from the legacy of transition that both created fragmentation of land and impedes solutions. Historic justice was placed above economic considerations. The resulting structure is inefficient and inflexible. Consolidation of the use through tenancy contracts is widely practised but not really desirable in the long run.

Transition has given one asset, though. Two types of Land Funds emerged from privatisation: state land on sale and unclaimed restitution parcels. In both cases, the government failed to transfer the land into private property. This land now holds the unique possibility of improving farm structure through land banking. It is difficult to get a clear image of the exact possibilities throughout the region, in terms of the size of reserves and the related political intentions. Such information may not even be readily available in the relevant countries. There are some remarks to be made, however.

The most familiar Land Funds are the large concentrated blocks in Poland. They are the state-farm land that went on sale in order to privatise their land. The reason that this land is not directly restituted to former owners is that the former owners were not Poles, but Germans. Namely, the Western border was moved westward just before collectivisation. The sale is not proceeding very swiftly due to several causes that make buying land unattractive. Thus, Poland has regions with fallow land on sale, and overpopulated agricultural regions as well. If Poland would implement a Dutch model policy on this the land on sale, agriculture could be seriously and rapidly improved.

Apart from Poland, also Hungary has concentrated Land Funds, consisting of former military terrains that are privatised through sale. There are plans to use the land banking concept to the full. A state agency is planned, that will buy and redistribute in the way the SBL does it. There is some resentment, however. There is a fear that the agency will get too powerful and that the Land Fund will disturb the land market. The size of the Land Fund is planned to be restricted to around 0.8 million hectares.

The diffuse Land Funds emerged in restitution areas, like in Bulgaria. Here, original parcels are returned to the owners, whether they asked for it or not. There are vast numbers of parcels that are not claimed at all (Creed, 1999). Sometimes the rightful owners just do not make the effort, or are reluctant because of possible future land taxing.

Bulgaria actually uses the reserves for an operational land banking system. A part of the Land Fund parcels are rented. However without regulations to assure that fragmentation is not aggravated by the rental pattern. Another part is used more efficiently, explicitly being referred to as a consolidation method (Kopeva, 2000). It consists of the exchange of scattered plots of private land with consolidated land from the Land Fund. The blocks of land from the Land Fund are large enough in size to ensure efficient agricultural production. In the Dobrich region, about 6,500 hectares (out of 22,000) are included this type of exchange. The practical implication of the exchange for the owner involves several offices that have to give approval, making the process lengthy (several months) and expensive. For the state, there are two advantages besides the improvement of the farming sector. The first advantage is that the parcels left behind are typically less in value. Since the farmer receives land of equal value, he leaves behind slightly more square meters than he obtains from the Land Fund. The exchange thus increases the Land Fund size. The second advantage is that the parcels, which the farmer leaves behind are of varying size and located throughout a large area, thus improving the possibilities for land banking.

6 COMPARISON OF DUTCH AND BULGARIAN LAND BANKING

The exact impact and origin of the land banking concept in the Netherlands and Bulgaria differs. In the Netherlands, the Land Funds had to be created. The polders emerged through land reclamation, and the diffuse Land Fund through buying parcels and subsidising farm termination. The Central European reserves are a by-product of privatisation. Furthermore, the Dutch land banking mainly targeted at farm enlargement within land consolidation projects, whereas the Bulgarian system seeks for consolidation for whoever is interested.

Nonetheless, important lessons can be learnt. The comparison of the Dutch and Bulgarian Land Fund practice yields three groups of issues, all essential for the effective application of the land banking concept. There are specific Dutch issues that are only related to that specific place and time. They can be ignored here. Then there is an overlap of Dutch issues that are (or will be) relevant in Central Europe too. For these issues, a comparison may lead to cross-fertilisation. Together with group number three (the strictly Central European issues), they may eventually add to determining a best-practice for Central Europe.

	<i>Size</i>	<i>Distribution of parcels</i>	<i>Agricultural land use</i>	<i>Dwellings</i>	<i>Forest and nature</i>	<i>Water and road infra</i>
<i>Wieringermeer</i>	20,000	1934-1941	90	2	3	5
<i>Noordoostpolder</i>	47,600	1947-1962	86	4	5	5
<i>Eastern Flevoland</i>	54,200	1962-1976	67	11	15	7
<i>Southern Flevoland</i>	43,000	1978-1992	44	12	35	9

The four Zuiderzee-polders and their different emphases (in %) on land use functions. Sources: Schimmel, 1987 (left two columns) and Van Lenthe, 1988 (right four columns)

The analysis of the Dutch polders reveals of dilemma's, the outcome of which can be dependent of the societal context. For instance, political inclination can either lead to a prosperous role model region or serve a more social purpose; creating employment and improving other regions. The Wieringermeer polder was dedicated to create a model of rational agriculture. The Noordoostpolder clearly laid emphasis on the social aspect. In the first years of parcel distribution, only people with a special background were eligible to acquiring land, and even after that period free settlement was relatively insignificant.

The decision, however, also depends on the profitability of farming. In the Wieringermeer (1930s crisis) the farm size was on average 32 ha, while in the Noordoostpolder (prosperous period) not more than 25 ha defined the average. The farms in Eastern Flevoland were created in a time of low output prices and high mechanisation costs. The average farm size here was 41 ha. The polders also mirror the declining role of agriculture in the increasingly prosperous Netherlands. Leisure, nature conservation and dwellings were assigned more space in every subsequent polder.

Another dilemma that holds relevance for Central Europe is choosing between legal types of land use. This choice is of vital importance on the long term. The pros and cons that were listed during the Dutch farm distribution have retained validity until today. The alternatives define a continuum, ranging from government control to land user sovereignty. Do note that the merits of regular tenure are strongly dependent on the existing legal implications of a tenure contract. During the history of the polders, Dutch tenants gained more and more legal security, making tenure increasingly suited.

The third dilemma is about development costs. Infrastructure, farm buildings and drainage imply huge investments. The actual design in cases can be a trade-off between construction costs and exploitation costs. The lower the construction costs (paid by the government, short-term investment), the higher the exploitation costs (paid by the farmer, long-term investment). In crisis situations, the demand for labour and building materials can be a positive stimulus for economy.

Issues on diffuse land banking include the framework for distribution of Land Fund parcels (only within land consolidation projects, or can non-participating farms also apply for enlargement), the embedding of the managing agency (part of the Ministry of Agriculture – thus guaranteeing an optimal connection to agricultural policy – or a more impartial Ministry like Finance), the type of tenure (in ownership the right way, or should the state maintain some power over the land), and the selection of the farms to be allowed to benefit from the Land Fund.

The use of the diffuse Land Fund in the Netherlands involved one specific issue that is not yet dealt with in Central Europe. It is the replenishment of the Land Fund. New buffer space can be created through voluntary transactions, possibly with financial incentives, like in the Dutch case. This would involve a land banking agency and the required finances. This activity will need careful consideration of the sensitive attitude towards government intervention in land ownership. Any suggestion of force has to be avoided in the Central European context.

The Bulgarian case learns about a specific Central European feature. The concentrated and diffuse Land Funds interact. Offering consolidated Land Fund plots leads to an enlargement of the diffuse Land Fund. This creates possibilities of land consolidation projects and farm enlargement in a wide area around the concentrated Land Fund. This particularity makes clear that Central Europe, concentration of plots is more important than farm enlargement. It also indicates the absence of wide-spread land consolidation activities. The diffuse parcels that are left behind by Dutch reallocated farms are directly used for enlargement in the framework of land consolidation, thus using up the diffuse Land Fund before it is even there. In essence, the only difference is that the Bulgarian systems keeps the diffuse parcels in store for a while, whereas the Dutch systems reassigns them the minute they are available.

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BIOGRAPHICAL NOTES

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