

From farm to neighbourhood farm

**Searching for a new form of organisation in the rural
community**

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This report was produced as part of the “Transition to Sustainable Agriculture” theme.

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Foreword

Major shifts are occurring within the Dutch agricultural sector. In itself this is not new. Indeed, it is fair to say that movement and change are characteristic of Dutch agriculture. Despite these changes, the agricultural sector in the Netherlands faces an uncertain future. Opinions differ as to whether a future exists and what it will look like. Particularly in agricultural circles, many people believe we should go further down the path of scaling up and specialising. After all, agriculture is an economic activity and the sector will increasingly need to compete on the global market. This requires high quality products producible at low cost prices. Others take the view that we should seek a solution in extensification. According to this line of thinking, there is no place for large scale intensive production.

As part of the Transition to Sustainable Agriculture theme, *InnovatieNetwerk* has worked hard in recent years on producing new concepts that place emphasis on new technology and scaling up. But there are also other developments that require attention. Therefore, *InnovatieNetwerk* decided towards the end of 2003 to develop new concepts that head towards extensification and widening of the sector. This approach is particularly important in regions with less favourable conditions for further rationalisation.

As this is a complex field, we decided to start with a pattern analysis. The reason for this decision was that it is important when developing new concepts to have a clear picture of the problems that exist. A sharp focus is essential. The results of our in-depth analysis are set out in this report.

The analysis is of a highly institutional nature and prompts the question of whether we have efficiently organised responsibilities for arranging and managing the rural environment. The analysis leads to formulation of design challenges, followed by the outlines of a new farm. The next step is to work towards new designs for such a farm. It will be a farm that combines several functions and is strongly embedded in society. To that end, we intend to prepare projects in the near future. The working title we have chosen is "Neighbourhood farm".

If the analysis appeals to you and you want to be involved in some way in producing these designs, I invite you to get in touch with us. You may very well already have ideas of your own or perhaps even experience in this field. For our part, we will keep you informed and examine how we can involve stakeholders in the process. This is part and parcel of the working method of a network organisation like ours.

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1. Introduction

Problems facing the rural environment are attracting attention. Interest is not confined to the immediate stakeholders, but extends to a far wider circle. Interest in Geert Mak's book ("*Hoe God verdween uit Jorwerd*") is illustrative in this context. It seems as though developments in the rural environment have features of a far wider social problem, with problems in the agricultural sector and rural environment being of metaphoric significance, so to speak.

The relationship between agriculture and countryside is generally regarded as an intensive one. It is so intensive that the impression exists that the problems facing agriculture are identical to and coincide with those confronting the rural environment. We do not share this opinion, but all the same there are undeniably some striking similarities in the nature of the problems.

This report looks at this matter from the angle of the agricultural sector. Instead of considering the problems as stand-alone issues, we have analysed the relationship between agriculture and the rural environment / society.

Agriculture occupies a special place in the rural environment issue. Originally, say up to the middle of the previous century, agriculture was the prime source of income and employment in a large part of the rural environment. Today, this no longer applies to large sections of the rural environment. But agriculture remains the major type of land usage. So agriculture continues to be extremely important as an embodiment.

Numerous reports and policy documents have been published over the past decades. They have repeatedly showed the existence of a complex and multi-faceted problem approachable from completely different perspectives. There is also widespread awareness that in all kinds of fields there is a need for modernisation. At the same time, we know from experience that this kind of modernisation is often difficult to put in motion. In a situation like this, it can be useful to obtain a sharper picture of the nature of the problems. What are the bottlenecks? Every reason, therefore, to examine the matter in depth. Based on the outcome, it will be possible to take follow-up steps that lead to a solution.

The structure of this document is as follows. We start by providing a general description of developments in agriculture and the sector's current status. This leads to a more detailed positioning and definition of the problem. Next, the document presents an in-depth analysis designed to identify pattern errors in the present system

of agriculture and rural environment. Based on a thematisation of these disruptions, we put forward design challenges and sketch the outlines of a new design.

2. Historical sketch and substantive positioning

The developments that have occurred in Dutch agriculture since the 1950s are impressive. Productivity has increased enormously. Dutch agriculture stood and stands worldwide as a model. Favourable conditions made the increase in productivity possible. There was an efficiently functioning knowledge system with strong inter-relationships between research, guidance and operations. New technologies became available that reduced the unit cost of product. In many instances the benefits of such technologies could only be utilised by producing on a larger scale. Land zoning projects provided the solution to this problem. The rural environment was laid out in accordance with the wishes of the agricultural sector, with a view to increasing production and reducing costs. European agricultural policy, with its system of market protection and guaranteed prices, made it worthwhile to use new technology. Prices were guaranteed in the principal land farming sectors (arable farming, dairy farming). During the 1970s, awareness grew that while this growth of agriculture was impressive in economic terms, it had major disadvantages in terms of nature, landscape and environment. At the same time, there was waning political and social willingness to earmark a very large proportion of the European budget to finance agricultural over-production.

The consequences are well known. Today, we have an agricultural sector that technologically is extremely modern. Yet the same sector finds itself in a crisis according to many people. This crisis relates to views on keeping animals and ensuring food safety, or the negative effects of intensive agriculture on nature, landscape and environment. Moreover, the government has abolished numerous forms of support. Ever since the 1980s, there has been a dismantling of systems for supporting prices and markets. Financing of over-production was no longer accepted because of the proportion of the national budget that it consumed. Food production is increasingly being considered a purely economic activity that should be subject to the laws of supply and demand.

Different answers are given to the question of whether the Dutch agricultural sector is up to the challenge. While some people are completely confident that the sector has sufficient prospects for the future, others doubt whether agriculture will survive in a prosperous and urbanising society. There is a fairly widespread awareness that sweeping changes will be necessary. Similarly, many people are convinced that agriculture in the Netherlands will exhibit multiformity in the future. Among other

things, there will be scope for types of agriculture capable of competing in the global marketplace thanks to the use of new technology. But this will not be the case everywhere. Particularly in regions that have physical restrictions or contain important nature and rural values, the baseline situation is not very favourable. Indeed, the question has increasingly been voiced in recent years of whether agriculture in these regions still has a future. Doubt is already being expressed in public, for example, about the chances of survival of livestock breeding in the peat pasturelands in the western provinces of the Netherlands. *InnovatieNetwerk* is already considering a landscape without agriculture. What would such a landscape look like? That is not the angle from which we have approached this issue. Rather, we want to search for promising forms of land farming, even though they may possibly differ significantly from the present situation.

This document centres on the following elements of the problem:

- there are regions where, on account of existing or new qualities or physical handicaps, a development into a globally competitive agricultural sector will be problematical;
- nevertheless, it is desirable that some form of land farming should remain in these regions, for example because use of land for agricultural purposes is desirable from a rural point of view and/or agriculture is part of the area's cultural history, or because agriculture has the potential of contributing to functions other than just food production;
- historically, agriculture in these areas often forms the principal source of income. There is an absence of new economic sectors of an appreciable scale that can provide alternative income sources. The upshot will be an absence of an economic foundation. In economic terms, this is an urgent matter;
- the essential changeover to different forms of agriculture or combinations of agriculture with other functions is progressing sluggishly. Although numerous reports contain direction-setting pronouncements, translating them into hard action with form and substance is moving ahead slowly. There are good examples of initiatives at individual farms aimed at modernisation and widening, but solutions with a more general validity that are usable on a wider scale do not yet exist;
- the result is that the number of farms is decreasing and the future of agriculture hangs in the balance. Some farms are being continued, even if continuation is indefensible based on purely economic conditions. The capital position makes this possible in many cases. Farm managers feel an emotional bond with the farm, for example. They are farmers in heart and soul and wish to remain so.

- the question of why change is occurring relatively slowly has been asked many times over the past few years. Although there are numerous initiatives for rural modernisation and widening, and there is widespread support for the need for further development in this direction, the modernisation process is not unfolding automatically. We know from experience that initiatives that in themselves are promising continually run the risk of ending up in difficult straits. We possess a large number of evaluations of policy targeted on specific fields. With some regularity, they mention the following key obstacles that stand in the way or delay modernisation and change:
- initiatives are mostly supply-driven and stem from the need to earn an appropriate income;
- most initiatives concern individual farms. Successes are quickly replicated, resulting in a situation where initiatives that in themselves are potentially successful quickly reach the limits of the market;
- the relationship between producer and consumer is weak. There is often little transparency in the supply chain. Consumers no longer know what they are eating, let alone how the food was produced. Consequently, it is difficult for enterprises to create a bond with the public / consumers.
- a related issue is that, generally speaking, there is no clear articulation of what society considers a desirable organisation and management of rural areas. While policy documents at various levels of government make countless pronouncements about what is required or prohibited, policy documents do not automatically generate action. There is a lack of drive;
- tension seems to exist between what members of the public express as their preferences for the quality of food and management of the rural area on the one hand and their behaviour as consumers on the other. In the everyday situation, the pricing of products has a greater influence on consumers' purchasing patterns than the views that consumers express as members of the public;
- legislation often presents an obstacle. Government policy has spawned a dense jungle of rules. Without detracting from the considerations on which the policy was or is based, it has to be noted that modernisation proposals constantly run the risk of being at odds with or breaching the prevailing rules. Similarly, tools often lack proper harmonisation with modernising initiatives;
- there is an intricate distribution of responsibilities and powers between various levels of government and between the public and private sectors. Harmonisation between authorities is a source of frequent problems;
- the knowledge network is oriented mainly towards and lends support for the approach of further rationalisation;

- rural planning has to date been dominated by thinking in sectoral and dividing terms. This splitting approach has been maintained all the way down to the level of plots of land;
- ownership and usage rights put a brake on change and modernisation. There is no verb more static than "own". The agricultural sector itself regularly proves to be an important obstacle in looking for and applying sustainable solutions and other forms of management. Agriculture is the main user of land. The ownership situation often obstructs change. Consequently, the agricultural sector itself forms a big obstacle in developing new prospects;
- the existing situation is often taken as the point of departure in the pursuit of change. The approach is for the most part incremental and far less of a designing nature, with the result that existing interests are the yardstick for modernisation. Efforts are focused too often on retaining what already exists and far less on developing what is needed.

3. Pattern disruptions

When change regularly encounters similar problems, there is evidently a need for deepening. There may be fixed patterns that thwart new initiatives more or less systematically. This makes us our own prisoner, so to speak. In situations like this, it is important to identify the system errors that are present, define them clearly and on that basis to adopt a targeted approach. There will be a need to break the pattern to prevent new initiatives from taking on the nature of fighting symptoms and predictably encountering system errors.

These are anxious times. It is no coincidence that in Chinese "crisis" is a concept expressed by two characters, one of which denotes danger and the other challenge. In crises, there is a need to shift frontiers. We will start with a general orientation, before specifying in detail the pattern disruptions that exist.

No matter how one looks at it, all types of agriculture always involve influencing conditions and production circumstances in a way that has a favourable effect on the yield. By definition agriculture is a form of intervention and manipulation. As more knowledge has become available about technical relationships, man has become increasingly better at making the conditions work to his advantage. So much so that we are now able to create a production environment, like horticultural greenhouses, where in large measure we are no longer dependent upon external influences. This way, agriculture gets characteristics of a manufacturing industry. Hardly any other sectors exist where the paradigm of Enlightenment (the world is knowable, discoverable and manipulable) has been milked so much as in agriculture in the Netherlands. Nevertheless, the agricultural sector is grappling with serious problems. The seriousness of the problems differs according to the sub-sector concerned. Also, the nature of the problems in horticulture or in intensive livestock breeding, for example, differs to that in the land farming sectors. In that respect, one could call the Dutch agricultural sector a model of a sector which, as it were, is nearing the limits of modernity. Gathering even more knowledge will not automatically result in a solution to problems. Moreover, the application of new technology regularly turns out to create problems that can no longer, and certainly not automatically, be solved by new technology. In many respects, the agricultural sector is a striking example of problems occurring in a wider social context. The result is that the chosen solution direction and the experience gained in that regard could have metaphoric significance in a social context.

This means that an analysis does not so much take the Enlightenment track of knowability, discoverability and manipulability as its point of departure, but it actually problematises its effects. We have apparently not been very successful in utilising the advantages of Enlightenment and simultaneously taking measures that avoid or adequately correct undesirable effects. Such an analysis can serve as a basis for formulating design challenges.

The question we then have to answer is which pattern disruptions or dislocations can be identified. We have identified those described below, whereby we will repeatedly make the link with agriculture.

3.1. Social dislocation caused by rationalisation

The modernisation of agriculture was in essence an economic process. The process was not only at the expense of nature values, landscape values and environmental conditions; modernisation also had great significance in sociological and institutional respects.

Rationalisation processes are fed and driven by economic considerations. The objective is to reduce costs, increase revenues or a combination of the two. At the same time, experience shows that rationalisation processes do not have an impact purely in economic terms. The effects are not confined solely to the domain of the economy, but are also of significance to society. Moreover, adjustments are often necessary, for example in an institutional respect, in order to be able to utilise the benefits of rationalisation. A different form of organisation is frequently necessary, ranging from new organisations or changes to the relationships between organisations.

So rationalisation also impacts on established organisational contexts. It impairs cohesion within and between organisations. Building up something new is inevitably accompanied by dislocation of what already exists; the modernisation of agriculture is no exception.

To obtain a better picture of dislocation processes caused by modernisation, it is useful to look separately at the level at which dislocation manifests itself and the nature of the dislocation. We will look first at the level at which dislocation occurs and make a distinction between the level of an individual farm and the level at which the relationship occurs between agriculture and society.

3.1.1. Levels of dislocation

3.1.1.1. Dislocation at farm level

The agricultural structure in the Netherlands has always been characterised at farm level by family-owned farms. Considerable appreciation existed and exists for the family farm as an institution. Among other things, there is praise for its flexibility. Although other organisational forms have come about, the family farm remains the dominant organisational form in Dutch agriculture.

At first sight, the family farm appears to provide a stable basis. However, the nature of family farms has changed considerably in recent decades. The traditional family farm as an organisational form has developed into an economic unity. Historically, in contrast, a family farm was not just an economic entity, but also a social community. Family and farm were interwoven in many respects. Family members lent a hand at busy times. The farm was literally a family farm. This social dimension is far less powerful today. Above all, an agricultural enterprise is an economic unity. The farmer is an entrepreneur, cows are a means of production. Means of production are used to pursue effectiveness and efficiency. The level of income, which is dictated by the market, determines the degree of success. This is a logical consequence of the view that food production is first and foremost an economic activity, whereby the level of income is primarily the responsibility of the entrepreneur. The consequence is that anything not translatable and traceable to economic terms carries less weight. It is fair to say that modernisation has highlighted the farm as an economic entity at the expense of the farm as social community.

3.1.1.2. Dislocation in the relationship between agriculture and its surroundings

What has happened at farm level is also in evidence in the relationship between agriculture and the rural environment. Traditionally, the importance of agriculture in a social context was not confined to farm level, but was also in evidence in the relationship between agriculture and society. For a long time, there was a strong degree of integration of agriculture in the rural community. Indeed, because of the way agriculture was organised and integrated in society, agriculture was also a source of cohesion in rural areas. This is increasingly less the case. The need for economically responsible production has been at the expense of the social dimension that traditionally characterised the function and position of agriculture in the countryside. While agriculture was originally an integral element in the rural community, it increasingly became a sector that claimed its own space for growth. Interests capable of delaying or thwarting the process of modernisation were considered an annoyance. Disintegration occurred, also in a physical sense, in the relationship between agriculture and its surroundings. Farms were moved out of residential centres because

scaling up and intensification required space that was unavailable. What's more, modernisation at farm level aggravated negative effects, like the nuisance of noise and smell, which society no longer accepted. In contrast, agricultural interests in the outlying area had primacy for a long time, while other functions, like public housing, were considered a problem. Residential functions were capable of obstructing further farm development. One example is the system of odour rights in livestock farming. New functions capable of hampering the further growth of farms were not allowed. At the same time, the countryside was organised in conformity with the wishes and requirements of a modern agricultural sector. By means of land zoning projects, the physical conditions were modified and made subordinate to agriculture. Water systems were reorganised to gear the supply and discharge of water to the needs of modern agriculture.

So today's agriculture is the result of a process that until the 1980s was dominated largely by agriculture itself. The agricultural sector orchestrated its own future. A sub-domain was created - within politics, policy and the knowledge system – in which there was an intensive consultative circuit, promoted in part by the existence of numerous personal unions. At the outset, there was hardly any consultation with the community. Similarly, there was little enthusiasm for a debate in society. This process is sometimes referred to as deruralisation. Huigen and Strijker (1997) defined this as the phenomenon whereby relationships between agricultural business and the spatial rural environment decreased in its intensity. As stated, agriculture itself contributed to this situation in not inconsiderable measure

3.1.2. Nature of dislocation

Dislocation is a wide concept. To obtain a better picture of the nature and consequences of dislocation, we will make a distinction between three components. We will examine separately the significance of dislocation in an organisational respect, then effects dislocation has on inter-relationships and finally the relationship that exists with questions concerning pleasure in life.

3.1.2.1. Organisational dislocation

Economisation changed the nature of the relationships existing between parties. Functional matters began to take hold. Relationships obtained significance mainly in a functional sense. This development is not unique to agriculture or the rural environment. The last century was characterised by the professionalisation of institutional contexts. The function-driven approach dominated. Problems had to be tackled efficiently. Performance of functions was rationalised. This resulted in a formalisation of organisations that took over tasks from previously informal contexts. When scaling up and specialisation become the guiding principle for organisational contexts, it is inevitably accompanied by formalisation of relationships. This

development was and is at the expense of social cohesion. While informal contexts function by virtue of mutual commitment and association, formal organisations are modelled to fit the requirements of efficiency and effectiveness, and they are held together by arrangements for allocating tasks and powers. Hierarchy as an organising principle takes the place of perceived and experienced togetherness. What previously spoke for itself within informal structures from now on had to be organised. The other side of greater efficiency is loss of cohesion. In other words, the cohesion within formal organisations is of a lower quality. It is organised and no longer perceived. Informal types of mutual assistance rendered voluntarily were replaced by bureaucratic organisations within which powers and rules determine whether somebody has a "right" to help. When organised professionalism becomes the norm, organisations built on involvement and spontaneity risk being marginalized.

What occurred in the rural community can be explained with the help of the twin concepts of *Gemeinschaft* (often translated as "community") and *Gesellschaft* (often translated as "society"). The concept "community" comes from German sociologist Ferdinand Tönnies. It is an organisational context in which people feel involved with each other naturally and organically. In a "society", on the other hand, concepts like efficiency and business dominate. At farm level and also at regional level, a transition occurred in the latter half of the last century. Organisational contexts exhibited increasingly fewer features of a "community" and developed more and more into a "society".

More or less comparable developments occurred in the public sector. Partly because of the need for spending cuts, a lot of attention has been given in recent years to increasing the efficiency of the government apparatus. It was decided to adopt a businesslike approach. This line is still in place today. Objectives are formulated based on tight analyses. Performance must be described in accountable and measurable terms. Public services are considered products subject to the laws of supply and demand. Policy is established based on plans of action that state what must be achieved by a certain time in each phase. Government organisations are thus becoming organisational units managed according to business principles. The result is that these organisations are no longer experienced as collectivities that carry out tasks that need to be carried out collectively in the public interest. Examples include the discussions about redrawing municipal boundaries. To a large extent the scaling up of municipalities is being pursued on the grounds of organisational benefits. It will make a municipality primarily an organisational unit and, consequently, it will be perceived less and less as a community.

3.1.2.2. Anonymisation of relationships

The pursuit of further rationalisation also has consequences for relationships. In a context guided by the drive to increase rationalisation, contacts ultimately only have meaning to the extent that they contribute to achievement of goals. Parties approach each other based on functions and on formal responsibilities and powers. This results in relationships being anonymised. Communication between people is replaced by communication between officials who in turn represent formal organisations. People contact each other when it is necessary to do so. Scaling up of organisations has also contributed to anonymity. Large organisations have been created. Within organisations, the need for specialisation influenced their internal structuring. The general nature of this process is graphically described by Eyskens (1995) who says: "depersonalisation is occurring in all social structures. The structures are becoming impersonal, dehumanised and depersonalised. Modern societies are run by an abstract authority, one without a profile, without a face."

Some illustrative examples exist in the agricultural sector. When new co-operatives were established towards the end of the 19th century, they were based on mutual commitment and solidarity. Scaling up produced large co-operatives that were primarily economic units and within which the original principles of solidarity were over time replaced by economic parameters. The same process has occurred in the relationship between producer and consumer. Whereas in the old rural community there were face-to-face meetings, the relationship between producer and consumer is now usually anonymous. The consumer purchases his food in the supermarket, where he can choose from a bewildering array of products. The producer is no longer visible on the shelf; producer and consumer no longer know each other. Market relationships are now characterised predominantly by anonymity. Market transactions have the nature of incidents. To the extent that relationships exist, they are tied to transactions.

Anonymity is characteristic not only of relationships in the agricultural sector. The same applies to the way nature management is organised. Today, nature is managed by large land management organisations. The size of the organisations and their working areas are generally so big that it is difficult to establish a direct relationship between individual members and concrete efforts. Moreover, the emphasis is on the public setting. This applies particularly to the State Forestry Agency. As a government agency, it receives contributions from public funds. The link between taxation and the activities of the agency is completely untraceable by an individual member of the public. But similar anonymity occurs at private organisations like the Natuurmonumenten Association and Provincial Nature Conservation Society. These are big organisations where the relationship between contributions from individual members of the public and the use of the contributions is not easy to trace and is not very transparent as a rule. A person who pays his annual contribution cannot attach as

a condition that the money will be spent in the area where he lives. It should be noted, however, that efforts are being made now to strengthen the link between members and activities.

3.1.2.3. Impairment of pleasure in life

There are two domains where rationalisation has impaired pleasure in life.

The first is the significance of agriculture. We have already seen that, up to the 1950s, agriculture contributed significantly to cohesion in the rural environment. Over the years, however, the dominant view that has penetrated policy is that agriculture is essentially an economic activity. The result is disappearance into the background of other significances that agriculture has or could have, or that they permanently run the risk of marginalisation. To some extent, this is not problematical and is explainable. After the Second World War, agriculture had the important function of assuring food supplies. This function has lost significance because we now have a guaranteed supply of food, at least in our society. But the emphasis on economic aspects impairs pleasure in life in other fields. For example, working with living matter is essential to agriculture. One could say that the way agriculture is carried out visualises the attitude dominant in society in relation to nature and living things. Does respect exist? To what degree must respect stand aside for economic gain? Thinking focused on rationalisation and control, which is characteristic of Enlightenment, easily leads in tandem with intensification of market mechanisms to a context where everything that is at the expense of profit-driven agriculture constantly runs the risk of being sidelined as meaningless. Anything that does not provide profit is unimportant. Conversely, animals are significant only to the extent that they produce profit. The value of a cow is directly proportional to its capability to produce milk and meat. While agriculture is potentially a powerful source of pleasure in life, a purely economic approach causes a situation where anything that does not demonstrably have an economic purpose will be neglected and considered insignificant. Pleasure in life is simply difficult to trade.

A second reason for diminished pleasure in life has to do with the relationship between public and government. The rural community in general and agriculture in particular have become the subject of intensive government involvement. This has resulted in a system of legislation that is very extensive in scale and exceptionally complex in nature. Legislation inevitably goes hand in hand with an impairment of pleasure in life. The assumption with any type of legislation is the existence of a problem that can be tackled by legislating. In other words, legislation presupposes that the government is dealing with a regulatable society. This is indeed how the government approaches society. More precisely, the government is only interested in society insofar as it can be regulated.

3.2. Disintegration of functions

A second pattern disruption concerns the function that agriculture fulfils. Land farming has always been a form of managing the rural area. Agricultural production by means of land farming inherently goes hand in hand with managing the countryside. Anybody who grows corn automatically manages an area through the growing of the crops. Production is accompanied by management. Growing corn automatically creates an embodiment of land management. Grass in livestock breeding is a means of production for milk. At the same time, pastureland draws significance from being an embodiment of the countryside. In other words, pastureland is significant to the production of grass and also a form of countryside management.

For a long time, there was no reason or need to make a distinction between food production and management of rural areas linked to agricultural production. Management was a logical consequence of agricultural production and coincided with the production function, so to speak. Production and management were not mutually conflicting.

The reason for making a distinction between agricultural production and management does now exist, however. The requirements that society expects management of rural areas to meet no longer automatically correspond with the requirements imposed by an agricultural sector geared to increasing productivity. A wish to have earlier cultivation of vegetables grown in open land leads to a situation where plots of land are covered with plastic in early spring, for example. While this may be desirable from an economic point of view, it is highly unfortunate from a landscape perspective. In the fruit growing sector, characteristic standard orchard trees have been replaced by low trees for reasons including the simplification of harvesting. Land division through the re-allotment of plots has resulted in plots of land being levelled out and wooded banks removed. This enabled more efficient use of new machines and other technology.

Modernisation has pulled apart the production and management functions, so to speak, and has resulted in a separation of functions. Modern agriculture was no longer combinable with the requirements of nature, landscape and environment. Whereas the integration of functions was once taken for granted, the separation idea now began to take hold. The basic principle was to stop pursuing integration, with as a logical consequence that choices had to be made. In part of the countryside, agriculture needed to be given ample space for further development, while in other areas nature and landscape had to be given priority. Agricultural production according to contemporary standards implies management of the rural area in the way considered desirable. A desirable form of management is no longer the logical consequence of agricultural production.

It is no exaggeration to say that uncoupling of production and management represents a break with the established system. While management of the rural area was historically an inseparable and accepted consequence of agricultural production, the link is no longer taken for granted. Indeed, whereas management historically was an effect of agricultural production, we now look upon management as a distinct and independent function that is not automatically in accord with food production.

3.3. Disintegration of control

The premise that integration of the food production function and other functions was no longer possible had and has far-reaching consequences in terms of control. Market mechanisms are increasingly decisive in the production of food. In the case of the other functions, like the management of nature and landscape, there is collective control through government regulation. The separation principle has not been implemented entirely, however, and it is unlikely to happen. We live in a densely populated country where numerous functions battle for priority. Multi-functional land usage is the obvious answer. A situation is unlikely to occur where agriculture can develop unhindered and has exclusive rights in part of the territory. Allowance will always have to be made for social preconditions rooted in government policy. So there will be hybrid forms where entrepreneurs are primarily dependent on the laws of supply and demand, but in their conduct of business will always face restrictive legislation. What is desirable from the point of view of market potential will not always be permitted by legislation.

Legislation from the point of view of landscape management is often at odds with the economically optimum conduct of business. Observing such rules often means higher costs and/or lower revenues for an entrepreneur. This represents a marked difference with the past. This distinction has resulted in a situation where each of the two functions has its own reward structure. The production function has a reward system via market mechanisms, or at least this is increasingly the case. In contrast, the management function is not driven by the market, but receives rewards through government policy, i.e. with the use of public funds.

Therefore, there is no longer integral control. In his conduct of business, the entrepreneur is dependent both on market forces and on the government's regulatory and compensatory systems.

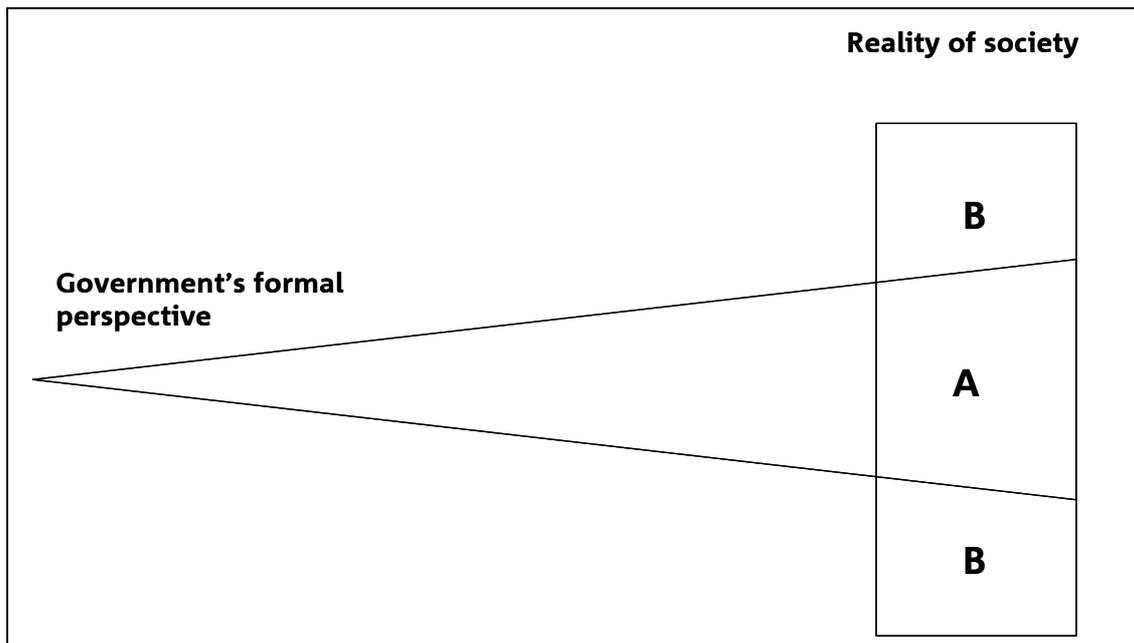
The entrepreneur finds himself in no-man's land, or that is how it feels to him. The different functions of economically competitive food production and socially responsible management of a region impose entirely different and often conflicting

requirements on the conduct of business. Economic requirements necessitate scaling up and intensifying, so as to reduce the production costs per unit of product. The maintenance of regional qualities, on the other hand, requires a reduction of scale and extensification.

3.4. Government control, the fiction

In the section on diminished pleasure in life, we mentioned that regulation by definition is accompanied by a narrowing of prospects. This also influences the quality of government control. The relationship can be defined in the following way:

Every regulation has definitions. Laws and by-laws typically start with an article that defines the terms used in the regulations. This is followed by a number of definitions penned with considerable feeling for detail and nuance. The government redefines social reality in a way that allows it to be regulated. The figure below is a diagrammatic representation of how this occurs.



The government approaches the reality of society from a formal governmental perspective. The result is that the government looks only at the part of social reality (A) that is significant within this perspective. Everything that is of significance to actors in society but falls outside the government's perspective (b) is irrelevant to the government, or at the very least meaningless. This has an intensifying effect. In management science, it is called the self referential reality of systems, i.e. organisations create an environment that fits them, which results in a narrow view. Anybody interested only in matters that can be regulated will be uninterested in matters that cannot be regulated. This creates a fundamental reversal: ultimately, the

government loses its ability to help solve problems in society, and instead society serves as confirmation of the government's perspective. The upshot is the existence of a complex system of legislation. To the extent that the system fails to deliver what is expected of it, there is a tendency to amend and/or enlarge the rules. In many cases, one rule spawns another. The road back is difficult. Even the abolition of legislation will need to be "regulated".

As a result, anything socially relevant but not regulable runs the risk of falling outside the government's perspective. Problems of any nature are reduced to problems that can be approached and solved through legislation. Problems are modified to fit the available instruments and rules, instead of the other way round. They are redefined to allow use of the available instruments. The government is unreceptive to problems that cannot be solved within the prevailing government domain. They simply don't exist or, at the very least, they are meaningless within the prevailing policy frameworks. In this way, the government is itself playing a part in impairing pleasure in life. Nevertheless, this is an attractive situation viewed from the government's position. By looking only at problems resolvable with its instruments, the government is not confronted by its own administrative impotency. From behind a desk, the world does indeed look orderly and surveyable.

On top of this there is the circumstance that we have pronounced views on the government's method of legislation. The government must act in accordance with the principles of good management. For example, we attach much importance to the principle of equality. While people may not be equals, the government must treat them as equals. This produces standardisation and uniformity. People are approached like objects that can be regulated. More and more communication with the government occurs in a legal context. As everybody knows, agriculture is a prime example of a sector that finds itself intensely confronted by the effects of more and more legislation.

The foregoing could conjure up a picture of permanent miscommunication between government and public. After all, to the extent that people attach different significance to practical situations than the government does, they permanently run the risk of the government dismissing their contributions as meaningless. Within its formal policy frameworks, the government has a monopoly on pleasure in life. Reality is less dramatic. People possess the capability, either with or without assistance from advisers and lawyers, to reformulate what they consider significant to make it fit within the government's policy frameworks if they consider such action to be in their interests. For example, an organisation will present plans in a way such that it conforms to the terms defined in the regulations for obtaining a grant. Similarly, people may interpret income in a way that allows them to avoid paying tax. Basically, communication

between government and society is to some extent a vehicle for manipulating pleasure in life.

3.5. Deterritorialisation

In a primitive society, there was a relationship between advantages and disadvantages within a surveyable territory. People resided, worked and lived within a certain area in a stand-alone community. There were hardly any contacts outside the community. The community was not dependent on other communities for its survival. On the other hand, the community was dependent on nature and on the natural conditions in the area where it was located. It was in the community's own interests to manage the natural environment and natural resources properly. Failure to do so would jeopardise the community's survival. If the community managed its land irresponsibly, for example, it would be at the expense of its productive capability. In other words, there was to a lesser or greater extent a closed system within a certain territory.

Today, little remains of geographically closed systems. Modern agriculture is increasingly becoming global agriculture. As far as raw materials are concerned, there is no longer dependence on one's own region. Imports enable us to take advantage of better production conditions elsewhere in the world. The same applies to sales. The result is that at regional level there is no longer any trade-off of advantages and disadvantages. No correction mechanism is activated when the advantages (in the form of economic gain) in one region are attainable only in combination with ecological deterioration in another region. Regional specialisation occurs worldwide. This applies not only to the way production is organised. Imbalances also occur between production and consumption. Some regions supply means of production, while consumption is concentrated in regions not confronted by the negative effects in fields like the environment. There is not a global settlement system that could serve as a correction mechanism. Worldwide, imbalances exist. There is no longer any dependency.

Deterritorialisation is not confined to the production of food. It is also in evidence in other functions that used to be carried out in a direct relationship with land and territory. People can use goods from all parts of the world. People can travel and enjoy the landscape elsewhere. There is no longer a relationship built on obligation.

4. Concise thematisation in terms of allocation of responsibilities

The pattern disruptions described above have in common that they impact on the system of allocating responsibilities. The agricultural system has lost its balance. There is not a coherent system geared to sustainability. Neither financially nor ecologically is agriculture a consistent or sustainable system, according to the report entitled "*Naar een Aartse Landbouw*" (1998).

These problems are obviously not unique to agriculture or to the management of rural areas. But agriculture is a striking example of a sector where technical progress has spawned major problems and not just impressive economic results. In a certain sense, the agricultural sector even exemplifies the view that modernisation within the Enlightenment paradigm also has disadvantages and can even result in dislocation. Economic rationality contains a core of irrationality (Adorno and Horkheimer, 1988).

In his own setting, G.A. van de Wal (2002) observed that our modern Western culture is inherently unsustainable. The economy has become independent and detached from the social, political and ethical context. There is no longer any framework that enables us to weigh non-economic effects of a purely economic approach and to weigh them up against profit in an economic sense. In other words, the economy has become its own criterion.

In an ideal situation, a system is in balance if the economic, ecological and socio-economic dimensions are in balance individually and in relation to each other. It is also important for the system to have a self-correcting capability when the balance is in danger of being disturbed. This necessitates the system being alert to an impending disturbance and to be able to initiate a movement towards balance.

As regards the way agriculture functions within a regional system in the Netherlands, it is difficult to claim, based on the described pattern disruptions, that a situation of sustainability exists. The system is characterised by imbalances. Imbalances occur in the following fields:

- the systems of ownership, management and profit are not integrated;
- functions have different time horizons;
- systems for settling advantages and disadvantages are absent or not properly geared to each other;
- there is no self-correcting capability.

We will look at these imbalances one by one.

4.1. Unintegrated systems of ownership, management and profit

To obtain a picture of the allocation of responsibilities, it can be useful to make a distinction between the system of ownership, the system of management and the system of profit. In an efficiently functioning system, these three sub-systems are geared closely to each other. Ownership must be interpreted broadly in this context. It is not only about ownership of land, but also ownership of usage rights. Somebody who holds a valid environmental licence, for example, has the right to pollute. This restricts non-agricultural functions within an enterprise's odour-spreading radius. If the business activities are terminated and the environmental licence revoked, these limitations cease to exist and make way for opportunities for profitable functions like building houses. Viewed in this light, environmental licences have an economic value, because they form a basis for obstructive power regarding non-agricultural functions. This can lead to a situation where a single large company has a de facto construction monopoly within a large area. Although this is not intentional, it is precisely how the present system works.

The opposite can also occur. The designation by the government of agricultural areas as part of the Main Ecological Structure will restrict possibilities for development on agricultural sites. Conditions are attached to usage by means of zoning schemes. In many cases, a system of planning permissions is put in place. The construction of new buildings or the expansion of existing ones will no longer be permitted in those areas. From a planning point of view, there is a shadow mechanism: the potential value that a plot of land has for development of nature functions imposes restrictions without any settling up of ownership and usage rights. The protection is intended to safeguard potential nature values. The circumstance that besides having an agricultural value a plot of land is also valuable from a nature point of view does not increase the value of ownership and use under the present system, however, and it actually has an unfavourable effect. Nature potential has no market value.

Technical progress and modernisation may have produced an enormous increase in agricultural productivity, but it has been accompanied by disadvantages. Those disadvantages have been dumped on the community to some extent. Examples include impairment of nature areas by acid rain, disappearance of landscape elements, nitrate pollution and phosphate saturation of agricultural land. The restoration of nature, landscape and water systems has to be paid for in full or in part by the community.

There are also examples that point in the opposite direction. The agricultural sector is increasingly expected to take into account views prevailing in society when it comes to production. If such requirements lead to loss of revenues or increased costs, there are hardly any possibilities for passing on the costs to the consumer. The entrepreneur is hampered by dependency upon the market.

The system of owning, managing and using land is structured in such a way that it is pre-programmed to cause disruption, so to speak. The individual sub-systems are not always focused on balance by a long way, and, what's more, they are not properly geared to each other.

4.2. Different time horizons of functions

Food production and the management of nature and landscape are functions that have entirely different time horizons. There are "fast" functions and functions that have a slow rhythm. Development of a nature area requires significantly more time than the production of potatoes. Or more precisely, some functions are of a slow nature. This difference is important because it can cause disruption. The pattern of income and the pattern of expenditure are not in synch. Some functions produce revenues in the short term, for example, whereas the expenses only become visible in the longer term. The impact on nature and the environment of excessively intensive agriculture are one example. The opposite also occurs. The initial phase of construction of a nature area is capital-intensive, while the benefits only emerge in the longer term.

These are major sources of imbalance. Advantages can be utilised in the short term and disadvantages ignored because they do not manifest themselves until later on. An example is the quality of the landscape in areas traditionally characterised by their small scale. Many landscape elements have disappeared because they literally stood in the way of further rationalisation of agriculture. From the 1980s, landscape qualities started to receive more attention again and an attempt is now being made to restore the qualities originally present. Time differences mean that creaming off the economic gain obtained in the past is virtually impossible. There is a settlement only in the event of illegal tree cutting; this occurs through criminal law but in most cases only to a limited extent.

Differences in time horizons can also be found in the environmental field. Indeed, the differences lie at the heart of the environmental problem to some extent. There are ample examples of how economic gain can be obtained in the short term, while the negative environmental effects only become visible in the longer term and can be reversed only through prolonged and costly efforts. A large proportion of sandy soil

has become saturated with phosphate because of the expansion of intensive livestock breeding. It will take years of effort to rectify this situation.

4.3. Lack of harmonisation of settlement systems for advantages and disadvantages

We noted earlier that the systems of ownership, usage and profit are not geared properly to each other. This problem could be overcome through settlement systems whereby advantages and disadvantages would be traded off against each other. But such a settlement system for advantages and disadvantages does not exist for the use and management of rural areas. This is one of the reasons why parties have no interest in correcting each other. The allocation of responsibilities is organised for each individual function. Functions that are economically attractive are regulated via the market and responsibility for economically less attractive functions rests in many cases largely with the government. The construction of homes is generally a profitable activity. A change to a zoning plan whereby the agricultural use of a piece of land is changed to housing construction will significantly increase the land's value. Under present policy, much of the increased value goes to the owner, without anything being required in return. At the same time, the costs of purchasing and creating nature have to be paid for almost entirely by the government.

We have already mentioned that the way control is organised gives rise to disintegration. To obtain a picture of the situation that exists, we will examine this matter from the point of view of the public. To the extent that market mechanisms work, the public are considered consumers. A person pays only for services that he wants and is unable to obtain free or cheaper elsewhere. He is approached as a person who acts rationally. His views are irrelevant.

To the extent that responsibilities have been embedded with the government, and the government exercises control, an individual is approached as a member of the public. This does not generally occur in a way that urges the person to become involved. Rather, there is an anonymous relationship. There is no relationship between the contribution a person must make (as a taxpayer, for example) and the way the money is spent. Similarly, there is no relationship in terms of cause and effect. A person who enjoys nature does not pay anything extra for it. Somebody who contributes to pollution is not taxed extra in many cases. The principle of the polluter pays is not yet easy to put into operation, or at least not in all circumstances and for all types of pollution.

Even when advantages occur at the same time as disadvantages, there is no guarantee that a settlement will take place. That is the case, for example, when advantages are obtainable through market mechanisms, whereas disadvantages cannot usually be coupled to marketable products. Control that occurs through the open economic game in the marketplace will trigger imbalance. Even if the government uses legislation to prevent the worst excesses, there will still not be a sustainable system.

4.4. Absence of self-correcting capability

We can examine the self-correcting capability of a system by answering the following questions:

- who caused the problem?
- who is inconvenienced by it?
- who has the solutions?
- who possesses the capability to initiate the process?

It is the exception rather than the rule for one and the same actor within a single system to be both the causer and the solver of the problems and also a party with an interest in a solution and who is able to act unhindered by third parties. The situation is usually different in practice. The level at which problems are caused and the level at which problem-solving capabilities are available do not always coincide by a long way. A party who pollutes will be confronted by the costs only to some extent. An organisation that under the present system of environmental licences has the right to pollute often has little if any interest in reducing the pollution. An organisation that must incur costs to discontinue negative effects will have only a very limited right to recover the costs.

The fact that several parties are involved makes it necessary for there to be co-ordination between those parties to ensure effective action. It is necessary but by no means automatic. We know from experience that good co-ordination between parties and between levels is anything but an automatic occurrence.

4.5. Summarising

The system of allocating responsibilities is a complicated one. Obvious solutions do not work. A shift between market and government regulation holds little prospects. Merely privatisation so as to rely more on market mechanisms has no effect. The market is only able to regulate if a number of conditions have been met. Market mechanisms work only for marketable goods. Consequently, it is unsuitable for

indivisible common goods or qualities like fresh air or rural qualities like openness or small scale. Moreover, pricing must be possible. There must be parties on the demand and supply sides, and also a meeting place where they can come together.

More regulation by the government does not seem to be the solution either, at least not in the way in which current governments have chosen to fulfil their responsibilities. The current system has high transaction costs. It is detailed, complex and highly legalistic. What is not prohibited is prescribed. Control and enforcement require substantial effort and manpower. In short, there is a need for integration of private and public goods and a new control approach geared to that situation, i.e. one that takes the place of market mechanisms and government regulation.

5. Challenges for designing a new system of responsibilities

Based on the described pattern disruptions and summarised thematisation, the question that now needs to be addressed is which modernisation tasks can logically be coupled. Which design challenges are needed and how can they be formulated as specifically as possible? There is clearly a need for a new system of allocating responsibilities for rural areas. In particular, this concerns the question of how food production can be combined with responsible management of the countryside. The general objective is to repair pattern errors. It is important for a new system of responsibility to enable integration of responsibilities.

If we search for a new system of allocating responsibilities, we face a far-reaching task that may also be of significance in a wider sense. There is a need for a new model of allocating responsibilities. This represents a formidable challenge. It means a change in relation to the present system in which responsibilities have been divided over various parties with a considerable feeling for detail, with agreement of carefully worded rules for the exercise of powers.

On the basis of the described pattern disruptions, it is possible to define more clearly the fields in which institutional modernisation is required. The items that need to be addressed are:

- integration of responsibilities
- relationship between public and private
- link between production and consumption
- a new control model.

5.1. Integration of responsibilities

As we mentioned earlier, a characteristic of the present system is the insufficient integration of responsibilities. This situation must be rectified in the following ways. Firstly, there is a need to integrate economic, ecological and socio-cultural aspects. Secondly, the systems of owning, managing and using must be geared to each other. Thirdly, the functions of food production and management need to be linked to each other. A new system of allocating responsibilities must be put in place in such a way that integration in all of these fields is advantageous. This makes it important to short-circuit within a newly designed system the positive and negative effects of

developments and practices. There must be transparent relationships that show up imbalances and occasion adjustment.

To this end, it may be desirable to establish new links between functions and environmental qualities. To mention but one example, the value of homes is determined in large measure by the qualities in the surroundings. A location close to a nature area or with an unobstructed view will generally increase the value of a home. Under the present system, the owner benefits from this situation, without being obliged to contribute towards the costs of organising and managing the surroundings. This prompts the question of whether a system is conceivable in which private ownership can be made subject to obligations to maintain qualities in the surroundings.

Another possibility is to level out disproportionalities in the distribution of advantages and disadvantages by using a new system of tax levying. A taxation system is imaginable built on a different foundation than creaming off income or economic gain. In a new system, activities that contribute to qualities and surroundings could be rewarded or exempted from taxation, while negative effects associated with economic activities could be charged on in their entirety through taxation.

5.2. Relationship between public and private

The existing distinction between private and public goods is due for a rethink. As we have seen, the separation principle dominates the present system. Private goods are subject to market mechanisms, while public goods are regulated through government control. Little linkage exists between the two control systems. But there is every reason to make such a link. Private goods, in this case agricultural products, have to be produced in an environment where collective values and goods are becoming increasingly important. Increasingly, this combination is producing problems. Obvious solutions, like giving private goods a little more space at the expense of public goods (or vice versa), are not a sustainable solution. A more gripping question is to bring about integration between the two categories rather than shifting the boundary between private and public goods. Therefore, the design challenge is to stop thinking in terms of a dividing line between public and private, and to look for a new commonality to replace the existing distinction.

A rearrangement of public and private goods will have far-reaching consequences, both in terms of ownership and in terms of operations. Can responsibilities now embedded at government organisations be coupled to private functions? This could break the trend of recent decades whereby, during organisation and management of

rural areas, the government all too easily became a collection bin for problems for which solutions did not immediately produce economic profit, or worse still, for which the government was saddled with unpaid bills because of a too one-sided orientation of private actors towards economic gain.

5.3. Link between production and consumption

We have seen that the relationship between producer and consumer is weak in several respects. They do not know each other and, what's more, the producer is in a dependent position. There is reason enough to strengthen this link. Traditionally, the countryside has always been regarded as production space for agricultural products. Agriculture has primacy. It is only over the past few decades that this situation has begun to change. The countryside has taken on increasing significance as consumption space. A good link between production and consumption space does not exist at the present time. What to one party is production space is considered and used by another party as consumption space. This gives rise to the challenge to design a management system in which production and consumption are harmonised more strongly than is presently the case.

5.4. A new control model

Market mechanisms have major disadvantages and government regulation has not produced sustainable solutions. Indeed, one could argue that the intense government involvement in agriculture and rural areas is part of the cause of the control problems. Government policy easily provides an alibi for public disinterest or even apathy. Yet this is precisely where a window of opportunity exists for creating a new system of responsibilities.

After reviewing some of the disadvantages of market mechanisms and government control, the question of an alternative now arises. Is there a third way? If so, how can it be given form and substance in practice? We have already observed that a need exists for more direct linkages in the control system between positive and negative effects. But that is not enough. A link must also be created between actors, between those who benefit from disruption and those who are disadvantaged by it. Responsibility must be given a face, in contrast with the current system in which responsibilities are given to fairly anonymous organisations. Members of the public must be able to experience advantages and disadvantages in their own setting. This calls for a system of maximum decentralisation of responsibilities. It needs to be a system in which

responsibilities for organising and managing regions are left to the regions concerned. It should be a system of subsidiarity based on the principle that responsibilities will be organised at the lowest level at which integration is possible. Consequently, the settlement for advantages and disadvantages must be organised at the lowest level possible. Settlement at local level should have priority over settlement at regional level, let alone global level. After all, globalisation can easily contribute to dislocation, because at worldwide level there is no settlement system and in all probability one will not easily be created.

Such a system differs considerably from the current situation in which responsibilities are centralised to a great degree and in which responsibilities have largely been taken away from the regions. We noted earlier that the way in which the two control mechanisms are used is a cause of disintegration. A design challenge exists to design a system that will replace the current combination of market mechanisms and government regulation: the third way.

6. Towards a new design

Based on the analysis and the identification of design challenges for a new system of responsibilities, we are able to formulate the design mission in the following way:

Produce a design for a collective farm that combines food production and care for nature, countryside and environment in a way meaningful to the public that assures continuity and enables responsibility for sustainable management of a region confidently to be left to that institution.

We will refine this broadly formulated design mission in a number of respects and look separately at substantive aspects of the design and tie in with the design process.

6.1. Content of the design

The following elements are important as regards the design.

Nature of the farm

There must be an integration of the three dimensions. It is of fundamental importance that a newly designed farm should not be designed solely as an economic unity. Besides food production, the farm's core business should include the upkeep and strengthening of nature and landscape. At the same time, the way business is conducted must be geared to socio-cultural values. Moreover, the forms of agriculture must do justice to features specific to the area: agriculture as a bearer of regional identity.

Technologically, it is important for the design to maximise the ability to close material flows the level of the farm. There must be as little shifting off of environmental costs as possible. Against this background, but also for production of a broadly based food package, a combined farm is the obvious option. This represents a break in the current trend towards more and more specialisation.

Economically, it is important for sustainable financing and operation to be possible. This requires long-term financing arrangements. It must also enable the farm to obtain an appropriate income. The income can be generated by the sale of products and services via the market and by payments received from the government for the delivery

of collective goods and services that are not marketable. The combination of technological and economic requirements may lead to a situation where the designed farm will need to be large in terms of surface area, perhaps a few hundred hectares. A farm of this size will be better able to close material flows and keep costs under control.

Participation by the public

We further concluded that the development that has occurred in the past decades has contributed to an anonymisation and alienation between producer and consumer, i.e. between farmer and public. A new design must restore this relationship. After all, we want a farm that is not only an economic unity in which efficiency must provide cohesion, but also a farm that is built on social pillars (or at the very least non-economic pillars). This is achievable because the structuring of the farm allows a lot of scope for participation by members of the public. This participation can take the form of the use of production factors (land, labour, capital, knowledge) or the sale of products and services. New forms of land ownership and financing should be included in the design, for example. Participation may also concern functions and activities that have not traditionally been connected with food production and management. It is also imaginable that a new farm structure will offer scope to functions that contribute to quality of life in the rural setting.

The point of departure that can be adopted is the question of how members of the public can be involved more directly in food production and the management of rural areas. Is it possible to involve a member of the public in a different way in the organisation and management of his surroundings than in the capacity of a consumer (as is the case with market mechanisms) or taxpayer (as is the case with government control)? Are forms of involvement conceivable that allow establishment of a more direct relationship between contributions and profits?

Some people may question whether this third way is likely to be feasible. After all, involving the public in taking responsibilities currently embedded largely with authorities may look a good idea at first sight, but is not entirely in keeping with the spirit of the times. It is true that a radical turnabout is required. Calling on people to take responsibility without getting anything in return will offer little prospects of success. A vague invitation to be a good citizen by taking responsibility appears to have no chance of success. The development towards a situation where responsibilities are embedded with the government is a logical fit in an age of individualisation. Relationships are characterised by the principle of *quid pro quo*. A person calculates. This actually reinforces the desirability of establishing a link between effort and result,

between sacrifice and reward. There is a need to focus on concrete relationships in which there is also a visible connection between effort and profit; a tangible interest must exist. So the challenge is to think up new forms that enable members of the public to be involved in a modern way in the production of food and management of rural areas. Essentially, we are looking for new forms of modern citizenship.

It is important to make the existing systems of rights and obligations part of the discussion. This concerns the relationship between the regulatory system and the public. A general appeal to morality has little chance of success. A person surrounded by a jungle of rules will not look upon it as an incentive to be invited to take personal responsibility. Within the existing policy context, the same person has become too much the subject and object of regulation. In a certain sense, this forces him to adopt a passive stance. The government regulates and the good citizen must fall into line. To materialise modern citizenship, it is necessary to have room for design. A person must be given an opportunity to fulfil his involvement and responsibility.

Cohesion

Participation by the public prompts the question of how relationships between individuals can be arranged. It is doubtful whether existing contacts are usable as a point of departure. Generally speaking, it is fair to say that any organisation or organised body is based on collectivity. Members share the view of a problem, an interest, a desired solution, a sense of urgency and above all the conviction that acting jointly is preferable to acting individually. The described pattern disruptions reveal a need for new thematisations. Outdated perceptions of problems and ambitions do not enable advancement. It is not possible to rely, certainly not automatically, on existing organisations. To a lesser or greater extent, they are the symbolic expression of how social issues were viewed in the past. If there is a need for new thematisations, it is coincidence rather than the norm if yesterday's organisations are able to make the step to tomorrow. From this stems the need to look for new forms of organisation. The new organisation will have a substantive component in the sense that the new collectivities will have to be sharply defined. What unites us? Which views and convictions do we share? What needs to be done? This clearer articulation of the collective interest is necessary because it must serve as a binding agent for new institutions. As we have seen, the pursuit of efficiency is too weak a basis for solidarity.

Identification of what members of the public have in common and what they are able to do together is essential but in itself not enough. New institutions must enable responsibilities to be borne. We do not need more-or-less voluntary forms of co-operation. We need organisations in which there is a balanced allocation of

responsibilities. Structures in which one party benefits from the efforts of another are unsustainable. Consequently, a design must provide the least possible scope for free riders. Nevertheless, that danger is present, particularly because the management of the rural area involves common goods. G Harding (1968) explains why, with the common management of land, we should not rely on common responsibility, especially not automatically. With the common management of a meadow, it is worthwhile for an individual to intensify the use he makes of the common good, because the community bears the disadvantages of more intensive usage. But what applies to him also applies to his fellow users. The result is that the system gets out of balance. In terms of inclusive and exclusive rights, we need to look for a combination of the two forms. It means that nobody may be excluded and that everybody must be allowed to participate. At the same time a decision to participate means that a person accepts obligations. Participation is not a non-committal. New forms of participation differ considerably from numerous instances of interactive policy making that frequently resulted in exercises in non-committal behaviour. Members of the public are reminded of their responsibility, but are allowed the freedom to fulfil that responsibility in their own way. Participation must in any event involve obligation. It must include a duty to make an effort, regardless of what form it takes. At the same time, participation carries an entitlement to profit; people have access to the services and products. The method of participation and the nature of the arrangements need to allow a lot of freedom of choice. While one person may make his contribution in kind by performing work, another may choose to buy off the effort required of him by making a financial contribution. Therefore, there will need to be organisational forms within which freedom of form exists, but within which at the same time there are relationships of an obligatory nature. This is achievable by building in a system of interdependencies. They must be such as to rule out the risks of sustained dislocation. Parties must have an interest in taking corrective action if there is a danger of dislocation. This necessitates a clear picture of the nature of the risks. The organisational form and the internal systems of corrective action must be geared to this situation.

One possibility is to organise relationships within the new farm model to the fullest possible extent based on reciprocity. We may be able to draw on experience gained elsewhere in this field. A feature of many traditional agricultural systems was that they allowed balanced and sustainable management. They produced food, but at the same time they maintained the food producing capability. Modernisation caused many local systems to lose their balance. Something that was economically profitable was by no means always acceptable ecologically. Research into institutional conditions within farming communities in the Andes revealed that the reciprocity principle was an

important explanation of the retention of balance. Even when different families owned and used the same land, the principle of reciprocity ensured that misuse was not worthwhile and was thus virtually non-existent (Haverkort et al, 2003). This gives rise to the question how the principle of reciprocity can be given form and substance in a contemporary way by means of modern arrangements. Experience gained with bartering systems might prove useful in this regard. It could involve new combinations of goods and services and new settlement systems.

Pleasure in life, organisation and decision-making

As mentioned earlier, forms of agriculture and management offer opportunities in terms of pleasure in life. It is important for both the activities and the organisational form to be perceived as meaningful. Such a farm would not primarily be a combination of functions and activities organised on the basis of efficiency and rationality, but predominantly a mental construction that is meaningful for the stakeholders and, consequently, ensures unity and commitment.

We have seen that the pursuit of efficiency easily leads to impairment of pleasure in life. The design challenge is to construct a farm in such a way that it is possible to utilise the potentials that exists in terms of pleasure in life. Raising efficiency in tandem with scaling up has determined to a large extent the form of existing organisations. The result has been the positioning of responsibilities at increasingly higher scale levels. Instead of this, a new design must be organised towards people and not away from them. Decision-making must take place at the lowest possible level in the organisation. Decision-making processes must be structured in a way that allows considerable scope for participation. A logical consequence is the allowance of ample scope for consideration of alternative perceptions. Instead of boiling down communication to single questions, we need to aim for ambiguity. As we have seen, the existing decision-making and regulatory models are based on reduction. Reality is reduced to an unambiguous reality that is simple to organise. We are either for something or against it. Making choices has centre stage and in essence lies at the heart of decision-making. This prompts the question of how decision-making can be organised in a situation where ambiguity exists. How can responsibility be arranged? How can continuity be assured while at the same time allowing multiformity? This requires an approach that differs considerably from existing models. Is a formal organisation conceivable within which there is scope for pleasure in life? An organisation in which several alternative significances can exist side by side? One in which mental models can be constructed that make action meaningful? An organisation that can be discontinued as soon as other significances and models become more dominant? How can a bond be organised in situations like this? This is

an important matter because at first sight there appears to be a negative correlation between bond and ambiguity. As individuals get greater scope for expressiveness, it seems to have an unfavourable effect on cohesion. Nevertheless, it is important for there to be sufficient collectivity within a new institution.

6.2. Basic principles for the design process

The analysis and the nature of the design that must be produced lead to some basic principles that are important in relation to the design process. Without pretending to be exhaustive, the following matters require attention.

It is important that neither existing institutions nor existing perceptions of problems, solutions and responsibilities should be taken as the point of departure. Working from the baseline of existing organisations entails the risk that new designs will be dominated by existing interests and will thus reproduce what we already have. It is essential for the new designs to break away from the established patterns.

Precisely because of the importance of pattern breaking designs, the practicability of the produced designs must not be applied as a decisive criterion in their examination. It is more important for the designs to give expression to new coalitions, new combinations of functions and new settlement systems. The logical consequence is that the designs will very probably be at odds with the prevailing policy rules.

A multi-disciplinary approach is preferable when producing the designs. After all, designs will have to exhibit integration of economic, ecological and socio-cultural values.

To produce a successful design for a new farm, a fundamental requirement is that the farm must have or get legitimacy in society. This contrasts markedly with most of the discussions currently in progress about the future of agriculture. The call to conduct agriculture in a way that the agricultural sector considers desirable or necessary must be set aside. It is no longer possible to create and maintain the reason for one's own existence in one's own environment. This inevitably involves an inversion of perspective. New forms of agriculture need to be designed from the baseline of society. In the existing situation, society is often approached on the basis of pre-defined agricultural interests. The issue is no longer to retain what already exists, but to move towards what is necessary and desirable. This represents a major turnabout.

As the designs to be produced must be meaningful for stakeholders, they must tie in to the fullest possible extent with what stakeholders consider valuable. Consequently, the designs should not be based on formal definitions like those used within the knowledge system. It is far more important to create scope for contributions of knowledge gained through experience. New institutions must make this possible.

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