

IN SEARCH FOR AN EVALUATION METHOD OF THE EC AGRICULTURAL POLICY IN THE LESS FAVOURED AREAS

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PREFACE

In this study a contribution to the development of a framework to enlighten the possibilities to evaluate the working of directive 75/268/EC (later part of regulation 797/85 and 2328/91) and of the EC's structural policy in general is given.

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1. INTRODUCTION

1.1 Introduction

The Common Agricultural Policy (CAP) of the European Community (EC) exists of two kinds of policies: a Market and Price Policy and a Structural Policy. Since the implementation of the CAP the Market and Price Policy which is paid by the EAGGF-Guarantee (European Agricultural Guidance and Guarantee Fund), has always been much more important than the structural Policy, which is paid by EAGGF-Guidance (see table 1.1).

Table 1.1 Development of the EC-expenditure on agriculture between 1985 and 1990 (in milliards of ECU)

	Expenditure of EAGGF-Guarantee	In % of total expenditure	Expenditure of EAGGF-Guidance	In % of total expenditure
1985	19.74	95.6%	0.90	4.4%
1986	22.14	95.8%	0.97	4.2%
1987	22.97	96.1%	0.94	3.9%
1988	27.69	95.9%	1.18	4.1%
1989	25.90	94.8%	1.43	5.2%
1990 *)	26.50	94.0%	1.70	6.0%

*) Estimation EC-Commission.

Source: LEI, Agricultural Economic Report, 1990.

Since a couple of years the Common Agricultural Policy (CAP) of the EC is being reformed for several reasons: one reason is that regional differences did not diminish within the EC since the beginning of the CAP (Slot, 1988). After the entrance of Portugal, Spain and Eastern Germany into the EC, this regional problem became even bigger.

As a result of this reform, policy makers have decided that more attention should be paid to structural and regional policies. The reform of the structural funds in 1988 and the new reform plans of Commissioner MacSharry are a prove of this new policy focus. In table 1.1 it can be seen that reform has already been put into practice, because the money spent by EAGGF-Guidance is relatively increasing in comparison with EAGGF-Guarantee expenditure.

In the light of these developments it is very interesting to have a closer look at the working of the structural policy within the EC. There are many structural programmes falling under this EC-structural policy. In this study attention will only be paid to one, namely the aid-programme for agriculture in mountain regions and other less favoured regions (in the rest of this study both called Less Favoured Areas (LFAs)).

This special aid-programme started in 1975 when directive 75/268/EC was implemented. The programme is the first regional structural programme for the agricultural sector, put into practice within the EC. An important part of the expenditures of the EAGGF-Guidance are spent on it (see table 1.2) and these expenditures have increased impressively in the last couple of years.

The policy objectives of the directive are described as follows: "In order to ensure the continuation of farming, thereby maintaining a minimum population level or conserving the countryside in certain LFAs (the list of which is determined in accordance with the procedure laid

Table 1.2 Expenditure of EAGGF Guidance on farming in LFA in the scope of dir. 75/268 and reg. 797/85, art. 15 and 17 (appropriations for commitment)

Year	Total expenditure (in mln ECU)	In % of total EAGGF- Guidance expenditure
1984	136.4	16
1985	118.1	13
1986	229.2	24
1987	260.7	28
1988	301.0	26
1989 *)	345.0	24

*) Estimate.

Source: CEC, Agricultural Situation in the Community, Report 1989, Brussels 1990, p. 110.

down in article 2), Member States are authorized to introduce the special system of aids (provided for in article 4) to encourage farming and to raise farm income in these areas" (OJ no. L 128/3). So the main idea behind the directive is that raising farmers income in LFAs will help to maintain a minimum population and will help to conserve the countryside in these regions.

Although the programme under directive 75/268 has been applied for at least 15 years few studies have been made to evaluate the working and the effects of this programme. Reason for this lack of information can be, that evaluation of the programme is very difficult. Therefore in this study attention will be especially focused on the way to evaluate directive 75/268 1).

The aim of this study is: In which way can the policy under directive 75/268 be evaluated in the different regions of the EC?

In the next section of this chapter first a description is given of evaluation. In this way it is being made clear from the beginning what evaluation means in this study. In the final section of this chapter a plan of the rest of this study will be described.

1.2 Theory of evaluation

Until now evaluation of structural measures taken within the EC has been done scarcely. The reason for this lack of evaluation is that it is often very difficult to do. A lot of information is needed which is usually not or partly available. Before a further description will be given of the problems that have to be overcome when evaluating policy measures it is useful to give a precise description of evaluation: "Evaluation can be defined as the confrontation between instruments used and the extent to which the formulated objectives have been realised (ex-post) or are expected to be realised (ex-ante) as a function of these instruments" (van der Stelt-Scheele, 1991).

It can be seen that there are two kinds of evaluation: an ex ante evaluation and an ex-post evaluation. Van der Stelt stresses the importance of doing an ex ante evaluation, because without this kind of evalu-

1) Directive 75/268 has been implemented in regulation 797/85, which has recently been codified in regulation 2328/91.

ation an ex-post evaluation will be much more complicated. In an ex ante evaluation the aimed effects of a policy instrument are being formulated; so it forces the executer of the policy measure to formulate in advance the working of an instrument. In this evaluation phase instruments (quantitative indicators) are created for the ex-post evaluation to determine if policy objectives have been realised. This is logical because when an executer makes clear in advance what he expects to happen, he immediately makes clear what information will be needed to verify this over time. So without the ex ante evaluation chances of lack of data for doing an ex-post evaluation are high. The quantitative indicators to determine if a measure has been realised have to be created later, after the implementation of policy measures.

When explaining an ex-post evaluation a distinction should be made between a process evaluation and an impact evaluation.

The questions that have to be answered in a process evaluation are:

- Has the regulation been carried out?
- Have grants reached the right group of beneficiaries?
- Were the grants directly aimed at the objectives of the policy-measures?
- Has there been any fraud or irregularity?

The questions that have to be answered in an impact evaluation are:

- Has not only the money been spent but has the project actually been carried out?
- Has the project achieved its objective or to what extent has the project achieved its objective?
- Was this due to the policy-instruments or caused by external factors?
- Were there any side effects?
- Could the same objective been realised in a cheaper way? (van der Stelt-Scheele, 1991)

In practice most evaluations of structural measures are process evaluations, not followed-up by impact evaluations. This has two reasons: In the first place a process evaluation concentrates on the allocation of government expenditure. So when the money has not been spent or has been spent on the wrong group of beneficiaries the impact of the measure will be zero. No impact evaluation will be needed any more.

In the second place it can be argued that an impact evaluation is often difficult or even impossible to carry out due to several reasons:

1. It is not possible to measure the effect of a project because there is no quantifiable indicator (example: projects to improve the image of a region).

This problem can be solved if in an ex ante evaluation quantitative indicators are designed by the policy makers so that it can be determined afterwards if the policy objectives have been realised. However if one starts an impact evaluation it is already too late to do an ex ante evaluation, because the policy measure has already been implemented.

In the case of directive 75/268 there is no ex ante evaluation. However, it is not too late to start an ex ante evaluation because the policy measure is still being implemented in new regions where no structural measures of the kind that have been taken before.

2. It is not possible to separate effects according to their causes.
3. There are no data available to construct a benchmark forecast.
4. There are no statistics available.
5. Evaluation is too expensive or too time consuming.

Of course these can be good reasons why impact evaluation is likely to fail but in some cases these problems can be overcome.

In this study it is aimed at finding a way to do an impact evaluation of the measures taken under directive 75/268 from an EC-level. Attention will be especially focused on finding a way to answer the question:

- To what extent have the measures taken under directive 75/268 achieved their objectives?
Besides some attention will be paid to answering the questions:
 - Was realisation of the policy objectives due to the policy instruments used under directive 75/268, or to external factors?
 - Could the same objective have been realised more efficiently?
- In the next chapters of this study a survey will be done of all the problems that have to be overcome to do such an evaluation.

1.3 Plan of this study

In the next chapter of this study a description will be given of the contents of directive 75/268. In chapter 3-5 a "dry evaluation" is being done in which the theory of evaluation is put into practice. However no statistical data are used yet. Evaluation is therefore only done in a theoretical way. In this "dry evaluation" the policy objectives and instruments are being operationalised and criticised and a picture is made of the problems that have to be overcome when evaluating the policy. In chapter 3 this is being done for the first policy objective, which is the maintenance of a certain population minimum in LFAs. In chapter 4 this is being done for the second objective, the conservation of the countryside. Finally in chapter 5 this "dry evaluation" will also be done for the income support instrument. In chapter 6 a description is given of the way in which the Dutch have filled-in their policy for LFAs falling under directive 75/268. This chapter is needed to get a better picture of the way the directive 75/268 is put into practice. It will be made clear that the scope that is left to the Member States to fill-in the directive will complicate evaluation on an EC-level even more.

In chapter 7 a concept is made of a practical way to evaluate the working of directive 75/268 at this moment. First a way to determine the effectiveness of the policy is proposed. Then there will be a survey of all the regional information needed to put the concept into practice. Finally, the information needed will be connected with the regional data available at this moment, in order to determine if the proposal can indeed be put into practice. This study will be finished with a summary and conclusions in chapter 8.

2. DIRECTIVE 75/268: A COUNCIL DIRECTIVE FOR MOUNTAIN AND HILL FARMING AND FARMING IN CERTAIN LESS FAVOURED AREAS

2.1 Introduction

From the beginning of the foundation of the EC it was realised that regional differences in farm structure and production circumstances, would complicate the realization of a Common Agricultural Policy. Therefore it was decided in the end-conclusion of the Conference of Stresa (1958) that the CAP should exist of two kinds of policies: a Market and Price Policy and a Structural Policy. Until the beginning of the seventies little attention on EC-level was paid to structural policy. In 1972 this has been changed by the approval of three socio-structural measures:

1. Directive 72/159 on the modernisation of farms
2. Directive 72/160 on the cessation of farming
3. Directive 72/161 for the vocational training of farmers

These three directives had a general character and their main objective was to increase output and to modernise farming structures. Most farms in LFAs did not qualify to apply for the support given under the three directives. In order to promote a more balanced regional development within the EC it was necessary to make another structural directive focused on LFAs. In 1975 directive 75/268 was implemented with the objective to ensure the continuation of farming, thereby maintaining a minimum population level or conserving the countryside in certain LFAs:

Directive 75/268 was the first regional instrument of the EC and moved structural policy into a more social phase.

In directive 75/268 the main policy instrument is the giving of income support to farmers in LFAs in order to raise their income. By doing this the policy objectives, which are the maintenance of a minimum population and the conservation of the countryside, are realised too. In the rest of this chapter the directive will be described further.

In section 2.2 a characterisation of LFAs as done in directive 75/268 will be given. In section 2.3 the instruments used to realise the policy objectives of directive 75/268 will be described. Subsequently a survey will be given of the changes of the directive since 1975 (section 2.4). The chapter will be closed with some concluding remarks (section 2.5). In this chapter only the most recent version of the directive (which is the version since 1985) will be described.

2.2 Characterisation of LFA

- Three types of regions qualify for aid given under directive 75/268:
1. Mountain areas characterised by a considerable limitation of the possibilities for using the land and an appreciable increase in the cost of working it, due:
 - either to the existence, because of altitude, of very difficult climatic conditions the effect of which is substantially to shorten the growing season;
 - or, at a lower altitude, to the presence, over the greater part of the district in question, of slopes too steep for the use of machinery or requiring the use of very expensive special equipment;
 - or to the combination of these two factors, where the handicap of each taken separately is less acute, provided that this combination gives rise to a handicap equivalent to that caused by the situation referred to in the first two indents (article 3.3 of directive 75/268).

2. Normal LFAs in danger of depopulation and where the conservation of the countryside is necessary, shall be made up of farming areas which are homogeneous from the point of view of natural production conditions and must simultaneously exhibit all the following characteristics:
 - the presence of infertile land, unsuitable for cultivation or intensification, with a limited potential which cannot be increased except at excessive cost, and mainly suitable for extensive livestock farming;
 - because of this low productivity of the environment, farm results which are appreciably lower than the mean as regards the main indices characterising the economic situation in agriculture;
 - either a low or dwindling population predominantly dependent on agricultural activity, and the accelerated decline of which would jeopardize the viability of the area concerned and its continued habitation (article 3.4 of directive 75/268).

3. LFAs which are small areas affected by specific handicaps and in which farming must be continued in order to conserve the countryside and to preserve the tourist potential of the area or in order to protect the coastline. The total extent of such areas may not in any Member State exceed 4% of the area of the state concerned (article 3.5 of directive 75/268).

All these regions occupy 52% of total farmland within the EC (CEC, 1990). LFA-regions are being selected by the Member States themselves. The regions selected are required to have the same characteristics as one of the above described LFAs. The EC has to give its approval to the selection of the Member States. In chapter 6 more information is given about the selection criteria the Dutch Government uses to select its LFAs.

2.3 Instruments used under directive 75/268

The measures taken under directive 75/268 can be divided into three groups:

1. Compensatory Payments (CPs) which can be paid:
 - a. to farmers with at least 3 hectares of cultivated land (2 hectares for the Italian Mezzogiorno, the French Overseas Departments, Greece and Spain, 1 hectare for Portugal, the Azores and Madeira) and who will pursue their activities or at least 5 years;
 - b. for the breeding of cattle, sheep, goats and horses (CPs may not amount to more than 20 livestock units per farm in LFAs who are strongly focused on milk production);
 - c. for vegetable production (the allowance is calculated in relation to the total area farmed, less the area required for feeding livestock, that is given over to wheat growing and area comprising beet, other intensive cultures, orchards and vineyards).

CPs can be characterized as follows:

- CPs are at least 20.3 Ecu per livestock unit or per hectare;
- The maximum amount paid per livestock unit or per hectare is 102 Ecu in normal LFAs and 121.2 Ecu in LFAs with serious natural disabilities;
- The CP is limited to 1.4 livestock unit per hectare under fodder;
- The maximum number of units that is considered for support is confined to 120 units (first 60 for full tariff and next 60 for half tariff)
- The Member States can differentiate the allowance depending on the economic situation of a farm or on the salary of a farmer or depend-

ing on the fact whether ecologically sound production methods are used;

- The EAGGF-Guidance pays 25% of the CP (this percentage can be raised to a percentage ranging from 30% to 65% for Objective 1 areas (See reform of the structural funds, CEC, 1990). The other part of the amount, which can range between 35 to 75% should be paid by the Member State.

So in practice the maximum amount of CPs paid per farmer can never exceed 9,180 Ecu in normal LFAs and 10,998 Ecu in LFAs with serious natural disabilities. The minimum amount of CPs paid per farmer will never be less than 306.6 Ecu in normal LFAs and 366.6 in LFAs with serious natural disabilities. However in Portugal, the Italian Mezzogiorno, the French Overseas Departments, Greece, Spain, the Azores and Madeira the minimum amount paid per farmer can even be lower than the minimum amount, because for those regions an exception was made so that farmers who own less than three hectares of land can get CPs too.

2. Special support for individual investments and collective investments. In case of support for individual investments the following remarks can be made:
 - A individual applying for support has to bring in a development plan. In the plan it must be made clear that after modernisation of the farm the farmer should be able to acquire for himself and possibly for one other employer an income that equals to 70% of a comparable income acquired outside the agricultural sector (for more information see directive 75/268 article 4);
 - The investment support can not exceed 60,606 Ecu/man-work unit and 121,212 Ecu per farm;
 - The EAGGF-Guidance pays 25% of total expenditure (this percentage can be raised to a percentage ranging from 30% to 65% for Objective 1 areas);
 - In mountain areas and LFAs the support is determined as a certain percentage of the total investment-sum. This is 45% of investments in real property (35% in normal LFAs) and 30% of other investments (20% in normal LFAs).

In case of support for collective investments the following remarks can be made:

- Investments have to be in favour of green-fodder-production and to improve collectively owned (mountain) pasture-land;
- Total support cannot exceed 100,000 Ecu per collective investment, 500 Ecu per hectare of improved or newly developed (mountain) pasture-land and 5,000 Ecu per irrigated hectare;
- This support can also be given to certain individual investments in mountain areas and all LFAs where cattle-breeding is more marginal in comparison to the rest of agricultural activities in the area;
- The EAGGF-Guidance pays 25% of total expenditure (this percentage can be raised to a percentage ranging from 30% to 65% for Objective 1 areas).

3. All mountain areas are free of the co-responsibility levy for milk. In LFAs there is no co-responsibility levy on the first 60,000 kg. of produced milk. In the LFAs of Greece, the Italian Mezzogiorno, Galicia and Portugal there is no levy at all. Although there are only three kinds of instruments under directive 75/268 the implementation of the instruments in the EC-Member States varies widely. This is possible because the directive leaves a lot of scope to the EC-countries for executing the directive. In title 1 article 1 of the directive it is put in such a way that when a measure is taken under directive 75/268 "the situation and development objectives particular to each region should be taken into account and the size

of the compensation can be made dependent on the seriousness of the handicap of an LFA". However final control over the way the measures are taken stays with the European Commission because: before a measure under the directive can be carried through by the Member State the European Commission has to give its approval.

2.4 Changes in time of directive 75/268

In 1985 regulation 797/85 has been established. Main aim of this regulation was to improve the efficiency of the agricultural structure within the EC. Simultaneously with the implementation of regulation 797/85 the contents of directive 75/268 have been changed:

Firstly, the maximum amount of CPs paid per livestock-unit (LsU) or per hectare was raised from 97 Ecu/ha. or Ecu/LsU to 102 Ecu/ha or Ecu/LsU.

Secondly, before 1985 no distinction was made between the amount of CPs paid to farmers in normal LFAs and in LFAs with serious natural disabilities. After 1985 the maximum amount of CPs paid per livestock unit or per hectare in LFAs with serious natural disabilities was raised to 121.2 instead of 102 Ecu/ha or Ecu/LsU in normal LFAs.

Thirdly, before 1985 CPs were only paid to a maximum of 10 dairy cows in areas who were strongly focused on the production of milk, after 1985 this number was changed into 20 dairy cows.

Fourthly, after 1985 it was allowed to the Member States to make the amount of CPs paid to farmers dependent on:

1. the economic situation of the farm and the income of the farm owner;
2. whether the farmers use ecologically sound production methods

Fifthly, in 1985 a maximum amount of CPs paid to a farmer was introduced. This maximum was confined to 120 units per farm.

In the course of time various adjustments on regulation 797/85 have been made. For clearness' sake regulation 797/85 has been codified in regulation 2328/91.

2.5 Conclusion

The essence of the directive is the principle that raising the income of farmers in LFA-regions will make them decide not to move away. So by giving farmers income support the maintenance of a minimum population level will be realised. Besides it is thought that preventing farmers in LFA-regions from moving away will help to conserve the countryside. So there are two policy objectives to be realised:

1. a demographic objective which is aimed at maintaining a minimum population level;
2. a countryside objective which is aimed at maintaining the countryside.

These two policy objectives have to be realised with three instruments, namely the giving of CPs, a lowering or remittance of the co-responsibility levy for milk and the giving of investment support to farmers in LFAs. In practice very little investment support has been given to farmers in LFAs. In this study the focus is therefore on the first two instruments. In theory the raising of agricultural incomes in LFAs is the only instrument to realise the objective of the directive. On the other hand, the raising of income in LFAs can both be seen as an instrument to realise the two policy objectives, but it can also be seen as another policy objective of directive 75/268.

To prove if the policy makers have been right about the fact that there is a relationship between the raising of agricultural incomes in

LFAs and maintaining a minimum population and maintaining the countryside, it is necessary to develop techniques to evaluate these expected relationships.

In the next chapters attention will be given to all the problems that are connected with the evaluation of the demographic and countryside objective. The aim of the following three chapters is to get a better idea of the way in which directive 75/268 (and regulation 797/85) is implemented, what information is needed for evaluation of the two objectives and if evaluation of the directive is possible at all. Attention will also be paid to alternative policy instruments to realise the objectives.

3. A THEORETICAL SKELETON FOR IMPACT EVALUATION OF THE DEMOGRAPHIC OBJECTIVE

3.1 Introduction

With the demographic objective the maintenance of a minimum population level in LFAs is aimed at. The main instrument to achieve this objective is the direct income support instrument. In directive 75/268 it is suggested that if income of farmers in LFAs is raised, these farmers will decide not to move away. So the minimum population level will be maintained by supporting the incomes of farmers. This relationship will be very difficult to prove. There are two problems that have to be overcome.

In the first place the demographic objective has to be operationalised. This however will not be easy because nowhere in directive 75/268 it is said what exactly is meant by a minimum population level. In practice every Member State can decide what a minimum population level is in its own LFA-regions. Therefore big national differences exist; in Belgium the minimum population level is 77 persons per square km and in Ireland this number is 24 persons.

In the second place it has to be proven that there is a direct relationship between the maintenance of a certain population level and agricultural income support. The population level in a region is not only determined by economic factors but also by cultural, social, ecological, political, medical and technological factors. The picture is even more complex because the working of the different factors may neutralise each other. Besides it is very difficult to explain why a certain person decides to migrate or not because this decision making process is not only determined by rational reasons but also by subjective ones.

In the next sections a theoretical framework will be set up to get a better picture of how the evaluation of the demographic objective should be done. In section 3.2, attention will be paid to all factors causing population loss in a region. The attention will be especially focused on the process of migration because this is the main determinant of population development. In section 3.3 a description will be given of possible ways to evaluate the demographic objective.

In the last section the question whether income support is the best instrument to stop or diminish population loss in LFAs is analyzed. This section is necessary to determine if the income support instrument is a good instrument at all to realise the demographic objective.

3.2 Factors causing population loss

The population level in a region is determined by the death/birth ratio and the migration ratio (Drewe and Veldhuisen, 1983).

The influence of the death/birth ratio is of less importance than the influence of migration, especially in western European countries that have very low death and birth rates in comparison to less developed countries in other parts of the world.

Therefore in this sections attention will be especially focused on the process of migration as being the direct and most important cause for population loss in LFAs.

Migration is a very complicated process because it is not a static process but a self-fuelling process in which migration makes part of a vicious circle. This means that once depopulation starts it will rather

increase than decrease and it will be very difficult to stop it (see figure 3.1).

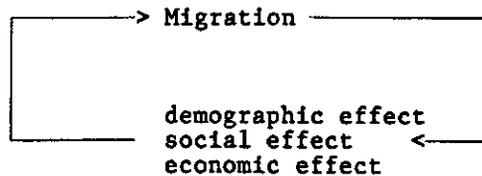


Figure 3.1 The vicious circle of migration

Migration has three effects on the region of origin:

1. A demographic effect: studies have proven that migration out of (rural) regions are age and sex specific. This means that in general most migrants are young, usually in the 18-30 age-group; and that there are generally unbalance between the sexes, with females exceeding males in some areas and males exceeding females in other areas (White, 1980). The effect of this phenomenon is the ageing of the remaining LFA population. On the long term the population will diminish even more because the death rate will exceed the birth rate.
2. A social effect; this again has to do with selectivity of the migrating population. It turns out that people who migrate out of an LFA are more often better educated and/or potential innovators or have more leader capacities. The result of this process is that the remaining community in a region will become "internally homogenous in psychosocial outlook with that outlook being dominantly a negative one towards the future of the community" (Leonard and Hannon, 1977).
3. An economic effect; which means that a loss of population will reduce the scope for, and viability of, commercial activity and it will reduce the tax base which may give difficulties in maintaining even the most elementary public services. This effect is extra big because the remaining population is disproportionately old and impoverished (White, 1980).

The three effects of migration will cause a further migration loss so that it will be very difficult in the future to stabilize the population development. In this model the starting point of outmigration in LFAs is not made clear. According to Meeus (1988) and Deavers (1989) the main causes for depopulation of the countryside are the modernisation and rationalisation process in the European agricultural sector and the general improvement of the standard of living within the EC. Especially farms in LFAs, which already have an income depression caused by natural handicaps, can not compete any more with the industrialised agricultural sector that produces in a much cheaper way. Therefore many farmers in LFAs are not able any more to earn a normal standard of living by working only on their own farm. They are obliged to do other work, outside their own farm, to supplement their income. Non-agricultural working opportunities may often be very limited in LFAs unless long distances are being covered to travel from the farm to the urban centres where the jobs are to be found. Therefore farmers in LFAs may decide to move out of the LFA to places where working opportunities are better and travel time to work is shorter.

Still the picture is not complete because migration is not only brought about by push factors but also by pull factors. The push factors, which are features of the region of origin that make migraters decide to move away, have already been discussed above. Pull factors are features of the region of destination that make the migrator decide to move to

that region. These factors can be, for example, better job opportunities or better medical and other services in the region of destination in comparison to the region a migrator is planning to leave. The influence of the different pull and push factors is very dependent on the local circumstances. For example if the distance between an area of destination and an area of origin is a 1000 km. a potential migrator will not decide as easy to move away than when the distance between the two areas is only 200 km. And when the distance is only a 100 km. he will perhaps decide not to move away at all.

Concluding, there are not only economic factors, but also other factors that make people decide to move out of a region. An LFA farmer may decide to move away because he can get a higher income in another region but he can also decide to move because the living circumstances in the LFA are deteriorating. (The living circumstances in a region are determined by cultural, social, ecological, economic, political, medical and technological factors.)

3.3 Evaluation of the demographic objective

Evaluation of the demographic objective based on the theory of evaluation as described in chapter 1 means that it should be proven that there is indeed a relationship between income support to farmers in LFAs and the realisation of the demographic objective. By doing this two issues should be kept in mind. Firstly, the effect of agricultural income support on the total population development in an LFA depends strongly on the size of the agricultural population in comparison to the total population in a region. If the agricultural sector is relatively big in a region, it may be the propelling activity. This means that if the agricultural activity disappears other activities have to stop too because they are closely related to the agricultural sector. If on the other hand, agriculture is a relatively small sector, the effect of agricultural income support on migration will be small. Secondly, the development of the population in an LFA is not only dependent on income support but also on other factors which have been described in section 3.2.

In theory the demographic objective can be evaluated in different ways:

1. A model study can be made to identify the factors that influence the population level in a region. In the model all factors that influence the population level should be included. The direction and the extent of the influence of a factor can be determined by using information from the past. The assumption in such a model study is that the situation in the past is also applicable to the present situation and that all factors of influence are included. The influence of the income support on the population development will be the unknown factor in the model. Disadvantages of this method are that it will take a lot of time and work to include all factors in the model and it will be very difficult to find comparable information about all factors influencing population development in the different LFAs of the EC.
2. The second way in which the influence of income support on the population level can be determined is by doing in-depths interviews with farmers and their families living in LFAs. In these interviews farmers should be asked about their motives to migrate or not to migrate. Attention should not only be paid to the motives of the farmer himself but also to the motives of the son who might take over the farm. A big disadvantage of this method is that a lot of time and money has to be spent to collect all the information. The processing of the information is very complicated and it is very

difficult to draw general conclusions for the whole region, country or even EC.

3. Finally it is possible to combine both above described methods. The information collected by doing in-depth interviews can be used again to set-up a model and the outcome of a model study can be verified by doing in-depth interviews. Again the disadvantage of this method is that it will take a lot of time and work.

So, the general conclusion that can be drawn is that evaluation of the demographic objective based on the theory of evaluation described in chapter 1 will be very complicated because it will take a lot of time and it is very dependent on the information available about the situation in the different LFAs of the EC.

- 3.4 Is income support the best instrument to stop or diminish population loss in LFAs?

Under directive 75/268 the only instrument used in most countries to solve the problem of depopulation is the giving of income support to farmers in LFAs (support for individual or collective investments is still an instrument rarely used in LFAs). In this section a description will be given of the depopulation process and alternative policy measure to solve this problem.

An important issue that should be put to the attention here is that factors influencing outmigration are very dependent on the local circumstances. So, efficient measures to stop this process should differ between the regions. On a congress held in Rotterdam in 1988 on depopulation and conservation of the European landscape the general opinion was that policies to stop depopulation and to conserve the landscape should be more regional specific (Meeus, 1988).

According to the policy makers the influence of income support on population development can be twofold. In the first place if the income of a farmer in an LFA is increased this might make a farmer or the successor of the farmer decide not to move away. Because with the income support a farmers standard of living is raised and/or he can invest more in his farm to make it more competitive. This again can have a positive effect on the decision making process of the successor. He might decide to take over the farm instead of moving away and selling the farm after the death or retirement of his father. In the second place the possibility that farmers in LFAs can get income support could attract new people to LFAs to start a new farm.

If the EC wants to stop outmigration in LFAs there are, beside income support, also other possible measures to take. Within the EC there are two kinds of LFAs: LFAs where depopulation has not yet started and LFAs where the depopulation process is already at work. Starting from the theory described in section 3.2, different measures for both kinds of LFAs should be taken.

In LFAs where outmigration has not started yet, measures should be focused more on preventing outmigration to start. This can be done by raising the standard of living and improving farm competitiveness, because these factors can be the reason for the beginning of outmigration. Income support in these regions can be very useful. Other measures can be: improving the road system in these regions, so that travel time between the farms and service centres or centres where alternative job opportunities are to be found is diminished, or by improving job opportunities in the LFA itself.

In regions where the outmigration process has already started it will be more difficult to stop this process. Once outmigration starts it is very complicated to break the vicious circle of population loss. Measures should now be focused more on diminishing the effect of population loss in the LFA. So measures have to be of a more general character, and not only focused on agricultural income support but also on improving the living-conditions in a region. One can think of measures like: subsidising public services and commercial activity so that a certain service level can be maintained, improving the road system so that travel time is diminished, attracting new enterprises to create new jobs in the region and to attract young people etc. Of course also in this last case the giving of income support should be continued but it should be given in combination with other measures because supporting agricultural incomes alone, will not be enough to realise the demographic objective.

4. A THEORETICAL SKELETON FOR IMPACT EVALUATION OF THE COUNTRYSIDE OBJECTIVE

4.1 Introduction

Evaluation of the countryside objective is not very easy. In the directive this objective was formulated very vaguely and therefore it is necessary to get a clearer picture of what exactly is meant with "conservation of the countryside" in directive 75/268.

According to Deavers (1989) the European view is that much of the territory must be maintained by man in order to protect the ecology, the natural and social environments and the beauty of the countryside. This was certainly also the view of the makers of directive 75/268. They started from the principle that if a minimum population level is maintained a conservation of the countryside will also be realised. The instrument mainly used in most of the Member States to realise these two objectives is the income support instrument. So farmers get income support to conserve the landscape. The way the income support should be given to farmers in LFAs is partly left open in the directive; The EC did impose some commitments and decided that there should be a maximum and minimum amount of CPs paid to farmers. However Member States are also free to decide by themselves if they impose extra commitments on farmers in LFAs.

Before starting a description of a possible way to evaluate the countryside objective in section 4.2 a description is given of the kinds of landscapes there are to be found in LFAs, the ways in which these landscapes have to be conserved and the things that will happen if the landscapes are not conserved. This section is included here because if one wants to evaluate a policy, one has to know what the result of the policy should be, and what is tried to be prevented by implementing the policy. After this description evaluation methods will be described (section 4.3). In the last section alternative policy instruments to realise the countryside objective will be discussed.

4.2 Landscapes in Europe and the need for maintenance

Meeus (1990) states that a landscape is created as a result of the interactions between nature, culture, use and maintenance of the landscape. The maintenance of the landscape has to be durable; otherwise the land will lose its quality and will not be fit any more to satisfy the needs of future users. The role of agriculture as a determinant of landscape is very important. So if the agricultural use is stopped or altered this may have important implications on the landscape. The implications are very dependent on the kind of soil and the kind of landscape.

Within the EC many different agricultural landscapes are to be found. Meeus (1988) divided Europe in 13 types of agricultural landscapes (see figure 4.1). According to Meeus it turns out that especially the Mediterranean open land, Coltura Promiscua, Montados, Highlands and Montagnes are very unstable and therefore are very sensitive to change. In a comparison of figure 4.1 and figure 4.2 (map of all the LFAs in the EC) it turns out that many of these above mentioned unstable areas are lying in LFAs. So the effect of abandonment of land on many landscapes in LFAs can be extra big in comparison with many landscapes lying outside LFAs. But, what are the exact effects of abandonment?

Nelson carried out a study on the effects of depopulation on farmlands in France. The environmental effect of the abandonment of farmland depends of course on the type of soil and on the climatic conditions. But in most of France the effect was as follows. First landslides and avalanches may start to occur. This threat is especially big in mountainous regions just after the abandonment, so before brushes and forest have at all been able to develop. Then the next fase starts, which is the invasion of woodlands, than follows the growth of brush and the "climax stage" is reached in the form of some kind of forest. This forest is "not always the best of habitats for fauna and flora which a few centuries of farming have taught us to appreciate" (Nelson, 1990). The forest that is formed in the "climax stage" is quite impenetrable and in the South of France it becomes dangerous as a potential fire hazard. Besides, these forests are not fit either to help to maintain mountain slopes because this role is better played by forests which are regularly managed than by "spontaneous development" type forests, nor are they fit for recreational purposes.

Furthermore, one should not forget that if farmland is not managed this will not only change the land but it will also effect the surrounding streams, lakes, hedges and other elements of the rural landscape.

On the long run if nothing is done to maintain the landscape the result of the abandonment of the land will be the "closing" of the landscape. This means that all open spaces will disappear and there will not be any panoramas or long distance vistas left. The landscape will become very monotonous. Meeus (1988) expects this to happen also. He also foresees that by the year 2000 some landscapes (see figure 4.1) will be disappeared.

So some possible effect of abandonment of agricultural land, as well as the need for maintenance of the landscape may be clear now. This gives an idea of what exactly should be prevented through the implementation of directive 75/268. This provides a way to evaluate whether the countryside objective has been realised as a result of the implementation of the directive 75/268.

4.3 Evaluation of the countryside objective

Evaluation of this countryside objective can be done by determining the development of the percentage of farmland that has been left fallow within a certain period in an LFA. Because leaving the land fallow is exactly what policy-makers want to prevent with the implementation of directive 75/268. So, if little or no land is left fallow in LFAs this might imply that the instruments used under directive 75/268 are effective. (In case it is difficult to get information about the percentage of farmland that is left fallow one can also use the total agricultural area- development within a certain period.)

However, only determining the percentage of land that is left fallow in an LFA is not enough because if one wants to evaluate in the way described in paragraph 1.2 it should also be proven that there is a relationship between giving income support and not abandoning farm land. There are different possibilities:

Firstly, one can determine the development of the percentage of farmland that was left fallow within a certain period before the LFA received income support and after the LFA received income support given under directive 75/268. If the proportional increase of fallow land was lower in the period that income support was given this might imply that there is a relationship between the giving of income support and the conservation of the countryside. If there is no information available about the period before an LFA received income support one can also make this comparison between two LFAs, of which one received income support in this

Figure 4.1: Europe divided in agricultural landscapes



Figure 4.1 Europe divided in agricultural landscapes
 Source: Meeus J., Changing agricultural landscapes of Europe: continuity, deterioration or rupture.

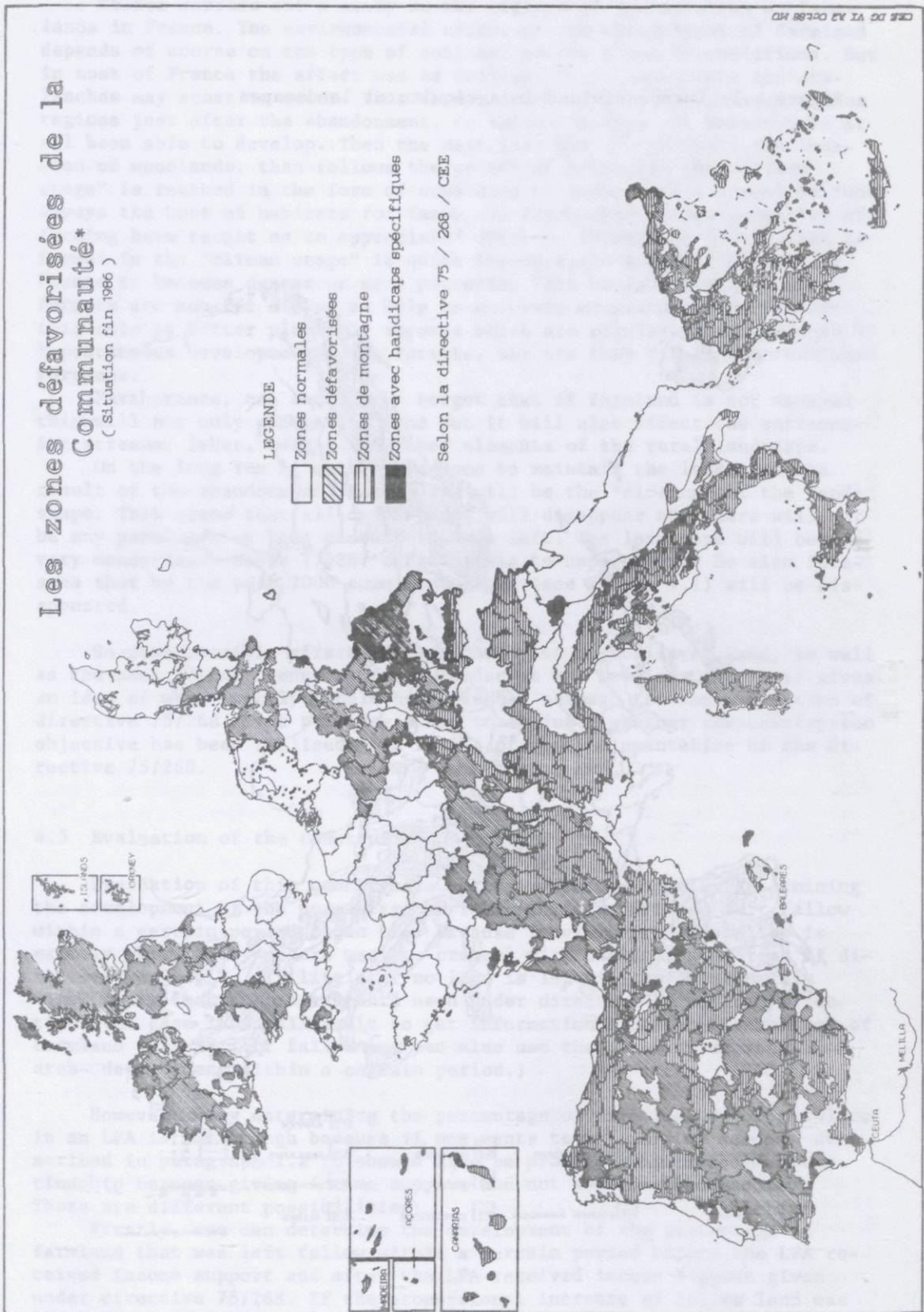


Figure 4.2 The LFAs in the EC
 Source: Commission of the EC.

period and the other one did not. Then for both LFAs the development of the percentage of farmland that was left fallow in a certain period should be determined. If in the region where income support is given the proportional increase in fallow land is lower than in the region that did not receive income support this might imply that there is a relationship. Major disadvantage of this method is that one can never tell whether there really is a relationship between the giving of income support and leaving less farmland fallow because there are so many other factors influencing this process also. The influence of all other factors can not be included in the evaluation.

Secondly, one can do in-depths interviews with farmers in LFAs. In this case attention can also be paid to the extra commitments Member States can impose on farmers in LFAs when implementing CPs, because also other factors that are of influence can be included in the evaluation. A major disadvantage of evaluation through indepths-interviews is that the results only count on a regional level. If general conclusions for the whole EC have to be drawn in many LFAs in-depth interviews have to be held. This will take a lot of time.

4.4 Alternative instruments to conserve the countryside in LFAs

The giving of CPs as a policy instrument to conserve the countryside can be questioned because there are also other ways to do this.

A countryside conserved by the farmer is not always the best solution. There are many different ideas about the best way to conserve the countryside. In some cases agricultural activity can be harmful for the environment because use of pesticides and fertilizers may reduce the wildlife and plant species and may pollute the ground water. Therefore there are many ecologists who prefer the deserting of land to spending a lot of money to make the farmer only decide not to move away. So, instead of preventing farmers to move away these ecologists want to start afforestation of abandoned farmland and use these newly forested farmlands for recreational purposes or as natural reserves. This of course does not mean that planting a forest is enough, because a forest and a natural park have to be maintained too. This will cost a lot of money and besides a complicated institutional network has to be set up to coordinate the maintenance of the natural parks and/or the new forest.

On the already mentioned conference held in 1988 in Rotterdam it was also stated that the farmer still was the best supporter of the landscape. Because supporting the landscape can always be done in a cheaper way by farmers than by public institutions. Also when measures to conserve the environment and the countryside are imposed on the farmers.

5. A THEORETICAL SKELETON FOR EVALUATION OF INCOME SUPPORT AS AN INSTRUMENT TO REALISE THE OBJECTIVES OF DIRECTIVE 75/268

5.1 Introduction

According to directive 75/268, the raising of farm-incomes in LFAs can be seen as an instrument to realise the demographic and countryside objective, but it can also be seen as another policy objective of directive 75/268. Policy-makers in Brussels saw it like this: If incomes of farmers in LFAs were raised by giving them income support the other two objectives would be realised too. So the demographic and countryside objective will only be realised if the "income objective" is realised too.

When evaluating the working of directive 75/268 two things have to be determined:

1. Whether the income of farmers in LFAs has been raised as a result of the giving of CPs.
2. Whether there is indeed a relationship between the raising of farmers income and the realisation of the demographic and countryside objective.

Ways to determine this last point have already been described in chapters three and four. Ways to evaluate the "income objective" however have not been discussed yet and therefore will get attention in this chapter.

In the next section of this chapter, the income objective will be operationalised so that ways can be found to evaluate the "income objective". In the third section an answer will be given to the question whether income support, given under directive 75/268, is a good instrument to realise the policy objectives. This chapter will be completed with a conclusion.

5.2 Operationalisation and evaluation of the income objective

In directive 75/268 it is made clear nowhere what exactly is meant by raising farm incomes in LFAs. There is no quantification of the "income objective". Still it is necessary to operationalise this objective if an evaluation has to be done.

The structural policy of the EC is aimed at diminishing regional income differences within the EC. As directive 75/268 is also part of this structural policy, income measures taken under this directive will also be aimed at diminishing regional differences. In directive 75/268 this is stated as follows: "Whereas the permanent natural handicaps existing in such areas (=LFAs), which are due chiefly to the poor quality of the soil, the degree of slope of the land and the short growing season, and which can be overcome only by operations the cost of which would be exorbitant, lead to high production costs and prevent farms from achieving a level of income similar to that enjoyed by farms of a comparable type in other regions" (CJ no. L 128/2).

So if we start from the principle that there are indeed permanent income differences between LFAs and non-LFAs we can say that the "income objective" is realised if regional income differences within the EC are diminished as a result of measures taken under directive 75/268. These regional differences are not only differences between LFAs and non-LFAs but also between LFAs and within LFAs. To evaluate whether regional income differences have diminished as a result of the application of direc-

tive 75/268 is not easy. It can be done in different steps. A lot of information will be needed to answer the following questions:

1. First one has to know how many farms in LFAs and how many LFAs in general made use of the directive. Answering this question is part of the process evaluation. The LFAs in which no farmer at all or relatively very little farmers made use of the income support measures have to be listed. In these regions no further investigations have to be done, because the answer to the question whether income has been raised as a result of measures taken under directive 75/268 will be a negative one. Besides if there are many LFAs that did not make use of the measures taken under directive 75/268, might already imply that directive 75/268 has not been very successful because only a little group has been reached. In this case it would be very useful to determine why so little farmers received income support under the directive.
2. Has the income of farmers within LFAs increased stronger than the income of farmers outside LFAs as a result of income support measures taken under directive 75/268? To answer this question the following information is needed:
 - a. To determine whether income of farmers inside LFAs has increased relatively more than income of farmers outside LFAs one has to know for both groups with what rate their agricultural income increased in a certain period. So income data (farm and non-farm income) have to be collected;
 - b. One also has to prove that the income increase was a result of income support measures taken under directive 75/268. So one has to determine which part of the income increase is a result of income support given under directive 75/268. Information about other income and investment support measures should be collected too.
3. The next question that has to be answered is: Have income differences between and within LFAs also diminished as a result of the income support measures taken under directive 75/268? This question should be answered too, because if one wants to diminish regional differences one has also to diminish the differences between LFAs and within LFAs. If one gives farmers within an LFA income support, the mean agricultural income in a region will increase but this does not imply that income support is evenly distributed over all farmers. Maybe only the richer and/or bigger farmers or richer LFA-regions received income support. In this way the income differences between LFAs and non-LFAs might have diminished though the income differences between LFAs and within LFAs did not diminish at all.

5.3 Is income support an effective instrument?

Now that we looked at a possible way to evaluate the "income objective" it is also useful to look at the implementation of the policy in a more critical manner. According to the directive income in LFAs is supported in three different ways:

1. Farmers in LFAs can get CPs.
2. Farmers in LFAs can get support for individual and collective investments.
3. Farmers in LFAs can get a lowering or remittance of co-responsibility levy for milk.

However, in practice in most LFAs very little use is made of support for individual and collective investments. This is a pity because precisely this instrument may lead to more structural and durable changes while only supporting a farmers income will in a much smaller degree lead to lasting structural changes (JO 16.12.85, p.53). Exactly these struc-

tural changes lead to a more stable situation in which there is less danger for depopulation and abandonment of agricultural land.

Increasing the agricultural income in LFAs through the giving of CPs might have some negative sides. At this moment support is given per hectare or per livestock unit. This means that bigger farmers with more land or more livestock units get more income support than smaller farmers. This does make sense because if one has more land one also has to spent more money to keep the land under cultivation. However in practice it is often the case, that to a certain extent, exploitation cost per unit decrease with increasing scale. So a farmer who has twice as much land as an other farmer should not get twice as much CPs. Besides the system of giving CPs per unit can also lead to intensification, which can be in contradiction with the countryside objective. Of course intensification will not go further than 120 units per farm and/or 1,4 livestock units per hectare fodder area and/or 20 livestock units per farm in areas strongly focused on milk production, but still in regions with a weak ecological balance this limit might already be harmful to nature.

To realise the demographic objective through paying a farmer per unit makes less sense. In this case main aim is to keep the farmer in an LFA and not to keep all the land of a farmer under cultivation. So, in LFAs where only the demographic objective has to be realised income support should be paid directly to the farmer, independently of the number of units. In this way bigger farmers do not get more CPs then smaller farmers and income differences within LFAs are not being increased or maintained.

So, the way income support should be given in LFAs depends strongly on the problem the LFA has; in some LFAs there is only danger of depopulation. However, depopulation and the need to conserve the countryside can often go together and in these regions it is more logical to make income support dependent on the size of a farm; but not directly proportional to the size as it is at present.

5.4 Conclusion

In chapter 3-5 a "dry evaluation" of directive 75/268 has been made in order to get a good picture of possible ways to evaluate the measure within the EC. It turned out that there are three objectives to be realised under this directive. The income objective can also be seen as an instrument to realise the other two objectives. Evaluation of the three objectives is not easy. First the objectives have to be operationalised. The operationalisation of the demographic objective and the countryside objective is much more difficult than to operationalise the income objective. Furthermore a lot of information will be needed to evaluate the three objectives and it is the question if all this information is available for all the LFAs.

We still have a very global picture of the way the directive is implemented in practice because a lot of scope is left to the Member-States for implementing the directive in their own country. Until now this study has only been done from a high general level. Therefore, before determining a definite way to evaluate the directive attention will be paid in the next chapter to the way one of the Member States worked this directive out in its own country.

6. IMPLEMENTATION OF DIRECTIVE 75/268 IN THE NETHERLANDS

6.1 Introduction

In this chapter a description will be given of the way the Dutch government implemented the directive 75/268. It will turn out that the measures to be taken under directive 75/268 are completely interwoven in a more general Dutch policy aimed at conserving nature and countryside in certain areas.

To get a better picture of how evaluation should be done of the implementation of the directive 75/268 in the Netherlands it will be very useful to describe of this Dutch policy and the place of the directive 75/268. The reason that the Netherlands are chosen here, is that it was easy to get information on the implementation of the directive in this country.

The structure of this chapter will be as follows. In the next section a description will be given of the practical implementation of the directive in the Dutch situation. In the third section attention will be paid to the demands a Dutch farmer has to satisfy if he wants to receive CPs. A description will also be given of the amount of the CPs paid to farmers in Dutch LFAs. In the last section attention will be focused on the possible ways to evaluate the Dutch implementation of the directive 75/268 and on the problems that may rise when doing such an evaluation. Besides a survey will be given of evaluation studies that already have been done.

6.2 Implementation of the directive 75/268 in Dutch policy

All the Dutch LFAs qualifying for CPs fall under article 3.5 of the directive 75/268. These LFAs are characterised in this article as follows: "Small areas affected by specific handicaps and in which farming must be continued in order to conserve the countryside and to preserve the tourist potential of the area or in order to protect the coastline. The total extent of such areas may not in any Member State exceed 4% of the total area" (OJ L 128/4) plus 1.5% of the total cultivated land of the state concerned. In the Netherlands therefore the EC-directive can be applied on a maximum of 190,000 hectares. In 1989 1.3% of all farmers in the Netherlands made use of the directive.

If the Dutch government wants to propose some Dutch areas to put on the list of LFAs falling under directive 75/268, attention is paid to the following points:

1. A region can only be put on the list if its specific handicaps cause an output depression of 20% or more. Specific handicaps can be the result of bad drainage, parcelling, relief but it can also be caused by periodic inundation (for more information about the determining of the output-depression see: Berekening van de Grondslagen van de Beheersvergoeding 1990, nr. 26, DBL, 1990).
2. The minimum extent of the area to put on the list has to be a 100 has. of united land.
3. The CPs in the Netherlands are only paid to livestock farmers because the compensation is only paid per fodder-area or per livestock-unit (LU). The areas that have to be put on the list, are at first instance selected by provincial authorities (Gedeputeerde Staten). If this list has been approved by the Dutch minister of agriculture it will be presented to the European Commission which

has to give the final approval. (For example, in 1990 a list of proposed areas was sent to the Commission to add to the already existing Community list of LFAs under the directive 75/268.)

The Dutch LFA policy is interwoven in the Dutch policy of nature and countryside conservation. A specific policy is made for agricultural land, with a high value of nature and countryside characteristics. This policy is called the "Relatie Nota" policy (RN-policy) and it was put into practice in 1975. Most Dutch areas falling under directive 75/268 are situated within the areas where this RN-policy is applied but there are also some Dutch LFAs situated outside the RN-policy-areas. In these Dutch LFAs (both RN-areas or non-RN-areas) a certain arrangement, called the Regeling Beheersovereenkomsten 1988 (RBO-1988) 1), is applied under which a Dutch "mountain farmer" can apply for CPs.

So, the RN is an arrangement in which the areas are allotted and general aims are described; whereas in the RBO-1988 more specific measures are described which should be taken to realise the aims described in the RN.

The minister of agriculture decides for every province how many hectares can be put under the rule of the RBO-1988. Then the provincial rule can make "supervision plans" (beheersplannen) for areas in their own province in which the RBO-1988 can be applied. In these "supervision plans" the exact boundaries are given of the area under the RBO-rule, the status of the area and the different measures that can be taken on every piece of land within that area. This will be further explained in the next part of this section.

With the status of an area it is meant that provincial rule has to indicate which part of the area is a supervision area and which part of the area is a reserve area. In both areas the farmers have the same rights, but in a reserve area it is aimed at acquiring area of farmers to put under the supervision of nature conservancy organisations. As long as this transfer has not taken place a "reserve area-farmer" is treated in the same way as a "supervision area farmer".

There are many measures and combinations of measures a farmer can take in areas under a "supervision plan". The different combinations of measures depend on the different aims that the government wants to realise in the areas under the RBO-1988. There are 8 different aims and 35 different combinations of measures that can be taken. These different combinations are called "supervision packets" (beheers pakketten). The first 4 measures (together called packet 1) are the measures to be taken if a farmer wants to obtain CPs under the directive 75/268. These

1) Before 1988 both the Beschikking Beheersovereenkomsten 1983 (BBO-1983) and the Beschikking Bijdrage Probleemgebieden (BBP) were applied in RN-areas. But in 1988 it was decided that policy under these arrangements was too slow and policy should be more adapted to the EC-policy under directive 75/268. Therefore the RBO-1988 was implemented to replace the BBO-1983 and the BBP. The reason that the BBO and the BBP still exist is that agreements that were made with farmers under these two arrangements can not be stopped right away. Every farmer has the right to prolong the agreement, and besides agreements made under the BBO-1983 and the BBP can only be replaced by an agreement under the RBO-1988 on a voluntary basis. Therefore it will take some time before the replacement is complete, but in any case every year more agreements come under the RBO-1988 and less under the other two. The working of the RBO-1988 will therefore be described now as the most important arrangement.

measures are to be taken under the aim: passive supervision (aim 1), which can be described as: the maintenance of the natural handicaps. This packet 1, which is called the "mountain farmers agreement" is always part of all other packets. So every farmer that enters into an agreement under the RBO-1988 is automatically a "mountain farmer" under directive 75/268, whatever the kind of packet he agrees to take.

If farmers agree to take the packet 1 they have to take 4 measures which will be described in the next section.

6.3 The extent of the CPs, the obligations for the farmers and the number of farmers that make use of it

There are 4 measures a Dutch "mountain farmer" has to take:

1. No actions should be taken that may change the topographic lotting, the micro-relief, the soil-structure and the soil-profile.
2. No actions should be taken that may change the trench-structure, the detail-drainage or that may lead to the lowering of the water-table or the lowering of the level of the ditch-water.
3. No actions should be taken that may change the country-side elements, unless actions are aimed at maintaining the landscape.
4. If at the moment that a farmer wants to enter into a "mountain farmer agreement" private under-draining is done, this activity should be continued. But the draining should be done in winter and in spring in such a way that the draining in both the under-drained and non-under-drained fields is the same. In this way the difference between water-tables is maintained.

If a farmer has fields situated within a supervision area he can enter into an agreement. The kind of packet that he can take depends on what aim is applied on his piece of land. But packet 1 is always applied and a farmer can decide if he wants to supplement the packet 1 with other supervision-packets that are applicable on his piece of land. If the farmer is not the owner of the land the agreement should also be signed by the owner, unless it is only a packet 1-agreement or an aim 8-agreement. The agreement has a term of 5 years and can be prolonged if both parties agree. The agreement can be stopped after 1 year, which is the time of probation. The payment for Dutch "mountain farmers" is based on the number of Livestock Units (LU) in the year that the farmer entered into a supervision agreement. The amount is paid per LU and depends on the type of soil (1 ECU = DFL 2.31). On clay and sand the maximum amount is f 180,- guilders and on peat it is f 260,- guilders because here the natural handicap is bigger.

So the payment will be as follows:

- cows (\geq 24 months) not being dairy-cows: f 180,- (on peat f 260,-)
- dairy-cows of which the milk is not going to be commercialised: f 180,-(on peat f 260,-);
- dairy-cows (\geq 24 months): f 180,- (on peat f 260,-), this amount is only paid for a maximum number of 20 dairy-cows;
- single-hoofed animals who are 6 month old or more: f 180,- (on peat f 260);
- cattle between 6 and 24 months: f 108,- (on peat f 156,-);
- sheep and goats: f 27,- (on peat f 39,-).

The total amount paid every year can not exceed the number of hectares fodder area times f 180,- (on sand and clay) and times f 260,- (on peat); neither can it exceed the 50% of the referent income of a full-working-unit in the Netherlands (This was determined at f 38,000,- guilders in 1988). The maximum number of milch-cows for which CPs are paid is 20 LU.

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- 1.2.3.4. Maintenance of the natural handicaps
5. Use lots as grassland which have to be mown or being grassed and mown; this has to be done every year
- 5a. Use lots as grassland; mowing has to be done every year, grassing is not allowed except in the period of the 1st of September until the 1st of January
6. No lots are allowed to be used as stable land
7. No ploughing nor milling nor sowing is allowed
8. Ploughing, milling and sowing is allowed, but only if after the ploughing or milling and before the sowing no animal manure (unless it is rough cow manure) is used
9. Not going on with sowing
10. Use no purification silt (zuiveringslib)
11. Do not manure with dusty lime
12. Use no animal manure (unless it is rough cow manure) in the period of the 1st of October until the 1st of March
13. Use no animal manure (unless it is rough cow manure) in the period of the 1st of September until the 1st of April
14. Use no animal manure in the period in which mowing and grassing is not allowed either
15. Use no animal manure, but in the period from the beginning of the rest-period until the 1st of April the distribution of rough cow manure is allowed
16. Use no animal manure (unless it is rough cow manure)
17. The minimum use of 10 and the maximum use of 20 tons of rough cow manure is allowed in the period of the 1st of August until the 1st of April
18. Only "plot-like" use of chemical pesticides is allowed
19. No use of chemical pesticides is allowed, unless it "plot-like" combat of field thistle, stinging nettle and sorrel
20. Use no chemical pesticides in the period in which no mowing and grassing is allowed
21. Use no chemical herbicides within 3 meters of the fringe of a field
22. Use no chemical herbicides
23. No rolling (of grass) and no dragging in the period of the 1st of April until the 1st of June or until the moment that grassing or mowing has been done
24. No grassing and no mowing in the period of the 1st of April until the 1st of June
25. No grassing and no mowing in the period of the 1st of April until the 8th of June
26. No grassing and no mowing in the period of the 1st of April until the 15th of June
27. No grassing and no mowing in the period of the 1st of April until the 22nd of June
28. No grassing and no mowing in the period of the 1st of April until the 30st of June
29. No grassing and no mowing in the period of the 30st of April until the 30st of June, besides the grassing of sheep is not allowed either in the period of the 15th of April until the 30st of April
30. The growing of maize is not allowed
31. Grow at least once in two years a corn crop, the growing of papilionaceous flowers is allowed once in 6 years
32. Grow a corn crop, the growing of papilionaceous flowers is allowed once in 6 years
33. No mowing and the use of nitrogenous manures is allowed in the period of the 1st of October until the 15th of June; in this period grassing is allowed of a maximum number of 5 cows more than 2 years old or 10 cows less than 2 year old or 15 sheep or 5 horses per hectare
34. No mowing and the use of nitrogenous manures is allowed in the period of the 1st of October until the 30st of June; in this period grassing is allowed of a maximum number of 5 cows more than 2 years old or 10 cows less than 2 year old or 15 sheep or 5 horses per hectare
- 34a. No mowing and the use of nitrogenous manures is allowed in the period of the 1st of October until the 15th of July; in this period grassing is allowed of a maximum number of 5 cows more than 2 years old or 10 cows less than 2 year old or 15 sheep or 5 horses per hectare
35. No ploughing, no milling, no sowing and no manuring is allowed, nor it is allowed to do dredging works or to use pesticides unless pesticides are used to "plot-like" combating of field thistle, stinging nettle and sorrow within 3, 5 or 10 meters of the fringe of a field. If an adjacent ditch has to be cleaned this can only be done in the period of the 1st of September until the 15th of October
36. During the breeding season and while there are chickens of colony breeders the concerning fields should not be set food on nor should there be any agricultural activity be done. (This prohibition may last at most until the 15th of June)
37. In the period of the 1st of November until the 1st of March no agricultural activities should be done, nor should there be any grassing or chemical pesticides be used
38. Maintenance of countryside elements

<p>PAYMENTS (per packet, in guilders/ha/year excluding the payments for passive supervision and including the extra payment for manure)</p>	<p>PEAT CLAY SAND</p>
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In general the maximum amount per ha. or per LU is paid to Dutch "mountain farmers" but if there is less than 1 LU per ha. than the amount paid will be less than the maximum. In 1990 only 15% (Directie Beheer Landbouw-gronden, 1991) of all the Dutch "mountain farmers" received less than the maximum amount.

To make the above given information more clear two examples will be given here:

Example 1:

A farmer has 20 has. of grassland, of which 10 has. are lying in a RN-area on peat, he has 30 milch-cows and 15 young cows of between 6 and 24 months old.

The amount of cattle is: $(30*1)+(15*0.6)= 39$ LU

CPs are only paid for at most 20 LU so the total number of LU for which CPs will be paid is 29. This is more than 1 LU per ha, therefore the maximum amount will be paid which is f 260,- per ha/year on a total surface of 10 ha. So the total amount this farmer receives will be f 2600,- guilders a year.

Example 2:

A farmer has 30 ha. land of which are 25 ha. grassland. Of these 25 ha. of land only 10 ha. are situated in RN-area. These 10 ha. are situated on sand. The cattle exists of: 5 older beef-cattle, 1 horse and 25 young cows of between 6 and 24 months old.

So the total LU are: $(5*1) + (1*1) + (25*0.6) = 21$ LU

Per ha. grassland and fodder-area this is $21/25 = 0.84$ LU.

So the total payment will not be the maximum but it will be:

$0.84 * f 180,- = f 151.20$ per ha. per year. The total amount paid will be $10 * f 151.20 = f 1512,-$ per year.

Table 6.1 The number of farmers and hectares with a "mountain farmer agreement" in 1989 (31 December), 1990 (31 December) and 1991 (9 July)

Year	Farmers	Area (ha)	% of total *)
1989	1965	13405	35%
1990	2413	16478	32%
1991	2564	18456	n.a.

*) Here the total surface under a "mountain farmer agreement" is given as part of the total Dutch surface for which a "mountain farmers agreement" can be made according to Dutch rule.

Source: Directie Beheer Landbouwgronden, Evaluatie verslag Beheersregelingen, 1990.

In table 6.1 one can see how many hectares and farmers have a "mountain farmers agreement". The number of hectares for which an agreement can be made increased as did the number of farmers who entered into an agreement.

In table 6.2 the proportion is given of the percentage of hectares for which a passive agreement (packet 1) was made or for which a more intensive agreement was made.

Table 6.2 The proportion of the area under passive (packet 1) and active supervision in 1989 and 1990

Kind of supervision	Proportion of the area in:	
	1989	1990
Passive supervision	6	12
Active supervision	94	88

Source: Directie Beheer Landbouwgronden, Evaluatie verslag beheersregelingen 1990.

The percentage of hectares under the packet 1 is not very high but has increased considerably between 1989 and 1990 1). In table 6.3 a further distribution is given of the proportion of has. falling under one of the 8 aims. Especially the meadow-birds supervision is very important.

Table 6.3 The proportion of the area under the eight different supervision aims in 1989 and 1990

Kind of aim	Proportion of the area in:	
	1989	1990
Passive supervision	6	12
Meadow-birds supervision	56	44
Meadow-birds/botanical supervision	19	22
Meadow-birds/buffer supervision	n.a.	-
Botanical supervision	13	12
Arable-land supervision	n.a.	1
Buffer supervision	n.a.	4
Other supervision (but not in combination with other supervision aims)	n.a.	5

Source: Directie Beheer Landbouwgronden, Evaluatie verslag beheersregelingen, 1990.

6.4 How to evaluate the Dutch results of the policy under directive 75/268?

Evaluation of the working of directive 75/268 in the Netherlands will be complicated by the fact that this policy is implemented in the Netherlands as part of a much broader policy under the RBO-1988. In section 6.3 it was noted that only 12% of all Dutch "mountain farmers" has a passive supervision agreement (packet 1). The other 88% are "mountain farmers" too, but they have to take the same four passive supervision measures in combination with other measures.

Of course this does not mean that evaluation of directive 75/268 is not possible in the Netherlands, but it means that evaluation is complicated: When determining the effect of directive 75/268 in the Netherlands one should be sure that only the effect brought about by passive supervi-

1) This can be explained by the fact that many farmers who had a "mountain farmers" agreement under the BBP or article 73a changed this agreement in a packet 1 agreement under the RBO-1988.

sion is evaluated and not the effect brought about by passive in combination with active supervision.

In the Dutch LFAs the main objective of the policy under the RN is to create a lasting relationship between agricultural activities and nature and countryside so that vulnerable countryside elements in the agricultural landscape will be maintained. This means that in the Netherlands the countryside objective, as one of the two objectives of directive 75/268, is seen as the most important objective. No attention is paid to the demographic objective, which may imply that out-migration is not seen as a problem in RN-areas.

Already some evaluation studies have been done of the implementation of the RBO-1988. Results of these studies can be used for evaluation of the directive 75/268 in the Netherlands. A disadvantage however is that in most of these studies no distinction has been made between active and passive supervision.

A brief survey of these evaluation studies is given below:

Since 1989 a yearly evaluation report is published in which results of agricultural and natural scientific investigations are collected in a more systematic way. Before 1989 evaluation of the RN-policy was done too, but these evaluation studies were less standardised so that comparison was more difficult.

This new systematic evaluation has two aims:

1. To get a good idea in which way the RN-policy has been put into practice until now.
2. To get a better picture of the effect of the RN-policy on nature and landscape.

In the report first a process-like evaluation is done of the implementation of the policy and subsequently a description is given of the outcome of some evaluation studies: The natural scientific evaluation studies are done in different regions, attention is focused on the development of the meadow birds population and on the development of the vegetation. In some cases a distinction is made between passive supervision and more intensive supervision (see: DBL, Evaluatie verslag Beheersregelingen 1989 and 1990).

More agricultural economic evaluation studies are done too in which attention is focused on structure of agricultural enterprises in RN-areas. Investigations are mostly part of the COAL-investigation which started in 1982 by the LEI-DLO. Focus is on collecting data of the structure of farms located in RN-areas. In these studies attention is also paid to the comparison of income of agricultural enterprises making use of the RBO-1988 and not making use of the RBO-1988. When evaluating the income instrument of directive 75/268 outcome of the COAL-investigation might be of use. Studies were done by the LEI-DLO and the results of these studies have been published (see: DBL, Evaluatieverslag Beheersregelingen 1989 and 1990).

Some results of the above described studies can be very useful in helping to determine the effectiveness of the policy under directive 75/268 in the Netherlands. However, a distinction between the effect of the 4 measures to be taken by Dutch "mountain farmers" and other measures to be taken under the RBO-1988 has hardly been made in most evaluation studies.

7. RECOMMENDATION FOR DOING AN EVALUATION OF THE WORKING OF DIRECTIVE 75/268/EC

7.1 Introduction

Until now only a theoretical evaluation has been done. Attention was paid to all difficulties to be met when evaluating the directive in the way it was described in chapter one. In this chapter however a more practical approach will be applied so that a workable way can be found to evaluate the policy in LFAs.

The structure of this chapter will be as follows: In the next section a proposal will be done to evaluate the directive. Subsequently it will be determined what kind of information will be needed to put the proposal into practice. In the last section of this chapter the information needed will be compared with the information available at this moment.

7.2 Proposal for a possible way to determine the working of directive 75/268

7.2.1 Deduction of the evaluation questions

The policy makers of directive 75/268 started from the principle that when income support was given to farmers in LFAs, three objectives would be realised:

1. Agricultural income would be raised in these areas.
2. Farmers would continue their activities and decide not to move away.
3. The landscape would be maintained, because farmers continue their agricultural activity and in this way maintain the agricultural landscape.

Starting from this principle means that the policy under the directive is based on two assumptions:

In the first place if farmers get a higher income the demographic and countryside objective will be realised.

In the second place income support as given under directive 75/268 will lead to a higher income for farmers in LFAs.

So the successfulness of the policy under the directive depends on whether the two above described assumptions are true. In this section therefore a way to test the assumptions will be described. First hypotheses will be deduced from the two assumptions so that testing is easier.

When testing the first assumption it is necessary to operationalise the demographic objective and the countryside objective. This has already been done in chapters 3 and 4. In these chapters this was done by determining what the policy makers of the directive aimed to prevent by putting the directive into practice:

In the case of the demographic objective policy makers try to prevent depopulation of the area. If one is talking about depopulation one thinks of the whole population in a region. However, the policy under directive 75/268 is an agricultural policy. The instruments used are only affecting the farmers income in an LFA. So the relationship between the raising of a farmers income and the development of the agricultural population will be a direct relationship. However, the development of the agricultural population may indirectly affect the development of the total population. So, there may also be an indirect relationship between

the raising of farmers income and the development of non-farm income. However this relationship will be much more difficult to determine because it is an indirect relationship and many more factors have to be included when studying it. In this study therefore only the relationship between farm income and the development of the agricultural population will be looked at.

Data that are needed to determine this depopulation are the development of the agricultural population within a region within a certain period.

In the case of the countryside objective policy makers try to prevent land becoming fallow. Data on the development of agricultural land within a certain period, within a region are therefore necessary.

Now that the objectives have been operationalised the first hypothesis can be formulated: Depopulation of the agricultural population occurs at a smaller rate and less land is left fallow in regions with a higher agricultural income.

When formulating the second hypothesis it is necessary to determine beforehand what exactly is meant with income support. Under directive 75/268 three types of income support are given, as one could already see in chapter 2. However in practice it turns out that only CPs are given and there is a lowering or remittance of the co-responsibility levy.

The second hypothesis to be tested can now be formulated in a more workable way as follows: The lowering or remittance of the co-responsibility levy and the giving of CPs leads to higher agricultural income in LFAs.

In both hypotheses it is talked about a higher agricultural income. However, a regional agricultural income includes all farm incomes in a region. However, it is very well possible that the number of farmers decreases but income per farmer (for example as a result of an increase of scale) increases. Total regional agricultural income stays the same but this does not mean that income in a region is not changed. So, in the rest of this study agricultural income per farmer or per hectare will be used.

In the next two sections a possible way will be described to test these two hypotheses.

7.2.2 A way to test the first assumption

Testing the hypothesis that depopulation of the agricultural population occurs less and less land is left fallow in regions with a higher agricultural income can be done in different ways. In this study the idea is put forward to compare regions with high agricultural income per farmer or per hectare with regions with a low agricultural income per farmer or hectare. This however can not be done just like that. First, some major problems have to be overcome.

In the first place it should be made clear what a high and a low agricultural income per farmer is. Is a low agricultural income per farmer or per hectare lower than the mean EC-agricultural income per farmer or per hectare, or is it lower than the mean national agricultural income of the country the region belongs to?

In the second place it would be insufficient to look only at agricultural income; because there are many farmers who also earn money by working outside the agricultural sector. Therefore, it is necessary to include off-farm income in the evaluation.

In the third place the question arises what regions are going to be compared with each other. When looking at the influence of agricultural income on agricultural population and on agricultural area development in regions, it makes more sense to do this between comparable regions in which the influence of other factors on agricultural income, agricultural population and agricultural area development are more or less the same. The words "comparable regions" are of course very vague. Therefore, determining what regions are comparable should be based on scientific investigation. In a study done by the LEI as called "Agriculture in the less favoured areas of the EC-10" (Tamminga, 1991) the EC-10 was divided into three groups of regions. This division of areas was based on the fact that this regions had some corresponding characteristics:

1. North-West: Ireland, United Kingdom, Belgium, The Netherlands and Denmark.
2. Central: West-Germany, Luxembourg and the North and the Centre of France.
3. South: Italy, Greece, and the South of France.

A further division was also made by distinguishing between centre and periphery within the three groups of regions.

In this study we are considering the EC-12. This means that Spain, Portugal and Eastern Germany still have to be put into one of the groups. According to the geographical situation of the countries it seems logical to add Spain and Portugal to the South-group and Eastern Germany to the Central-group.

With this division of the EC-12 regions, it is easier to determine what a low and a high agricultural income is. This can be done by comparing agricultural income in a region with the average of the total group of regions. So, agricultural income of regions situated in the North-West should be compared with the mean agricultural income of the North-West.

In this way one gets a nice division of regions with a low agricultural income per farmer or per hectare and regions with a high agricultural income per farmer or per hectare. These data have to be compared with data on agricultural population development and the development of land becoming fallow or the development of the agricultural area.

If all this information is available for the different regions of the EC-12 it can be tested if the policy makers were indeed right to start from the principle that there is a relationship between the level of agricultural income per farmer or hectare and the development of the agricultural population and land becoming fallow.

In the next section a way will be described to test the second assumption the policy-makers of directive 75/268 made.

7.2.3 A way to test the second assumption

In this section a way should be found to prove that the giving of CPs and the lowering or remittance of the co-responsibility levy lead to a higher income per farmer or per hectare in LFAs. The reason that this question should be answered is, that one can not be sure of the fact that if someone's income is supported it will automatically be higher than without that support. One should not forget the possibility that a farmer could also have decided to enlarge his income in another way, if he had not received income support. Therefore, in the next part of this section first, attention will be paid to ways to prove that income support, given under directive 75/268, leads to a higher income per farmer, then, ways will be described to determine if farm income would also be raised without income support. First the influence of CPs will be looked at separately from the co-responsibility levy.

Determining the influence of CPs on farm income can be done by comparing LFAs that did receive CPs with LFAs that did not receive CPs. To do this, information on how many farmers received CPs in all LFAs, and the amount of CPs paid to all farmers within the different regions of the EC for many years will be needed. Subsequently, information on the income development of farmers in LFAs should be collected. This information has to be divided in farm and off-farm income.

When collecting the data on CPs and on LFAs, two things have to be put in mind: In the first place, a problem will arise when distinguishing between LFAs and non-LFAs because the number of LFAs increased in the last couple of years. Therefore it is very well possible that LFAs have only become LFAs since two years. Data on the time when a region started to be an LFA are therefore very important.

In the second place, when comparing LFAs with each other it is better to compare LFAs with about the same characteristics. Therefore it is also in this case useful to use the division of regions of the EC-10 made in the LEI-study, as described in section 7.2.2, as a comparison basis.

Now that all data have been collected the next step will be to compare farm income development within a certain period for LFAs with CPs with the agricultural income development in the same period for LFAs without CPs. If it turns out that the farm income in LFA with CPs increased more than in LFAs without CPs this may indicate that CPs indeed raise income. However, if the contrary has happened: income in LFAs without CPs increased more than, or increased with the same amount as, the income of LFAs with CPs, it implies that income will also increase without CPs. The following situations are possible:

If in a region no CPs would have been paid, more farmers could have decided to move away and sell their land to the remaining farmers in the region. The remaining farmers could enlarge their farm and increase their income. In this way their income would have been raised and agricultural income per farmer could have been raised also. To determine if this indeed has happened, one can compare two things with each other:

Firstly, the development of the farm size with the development of the agricultural income per farmer in LFAs without CPs and with LFAs with CPs.

Secondly, the development of the number of farmers with the development of agricultural income per farmer in LFAs with and without CPs.

If in LFAs without CPs agricultural income per farmer increased in combination with a decrease of the number of farmers and an increase in mean farm size, this may indicate that the above described situation occurred indeed.

Another possibility is, that in regions that do not get CPs farmers decide earlier to do extra work outside their own farm in order to earn some extra money. In this way off-farm income of the farmers will be relatively raised and so will their total income. To determine if this indeed has happened a comparison should be made between the total income earned by farmers outside their own farm in LFAs with CPs and in LFAs without CPs. If it turns out that income earned by farmers outside their own farm increased more in LFAs that did not receive CPs, it indicates that income also increases if no CPs are given.

Until now attention was only given to the influence of CPs on farm income in LFAs. However, the influence of the lowering or remittance of the co-responsibility levy should be determined also.

Unfortunately, data on the implementation of the lowering or remittance of the co-responsibility levy in the different LFAs are not avail-

able now. Therefore it is not clear if this lowering or remittance of the levy is put into practice in all LFAs and if there is only a lowering or a complete remittance of the levy in LFAs. So, at this moment it is not possible to describe a way to determine the influence of the lowering or remittance of the levy on income in LFAs. Information on the implementation of this measure in all LFAs of the EC will be necessary before a definite way can be found to determine the influence of the lowering or remittance of the levy. (In the Netherlands most dairy farmers in LFAs get a remittance of co-responsibility levy. With most dairy farmers, the farmers are meant of which more than half of their property or the farm-buildings are situated in an LFA. In other countries this situation can be completely different.)

Despite the failing of enough information, some different possibilities will be described to determine the influence of the measure in two situations:

If the situation occurs that the lowering or remittance of the levy is only put into practice in some LFAs and not in all, income development in LFAs with a lowering or remittance of the levy can be compared with LFAs without a lowering or remittance of the levy. In this case testing the influence of the measure will be the same as testing the influence of CPs as was already described in the former section. Only one thing is different; a CP can influence the income of all farmers in an LFA, and a lowering or remittance of the co-responsibility levy only influences income of dairy farmers in LFAs.

If contrary to the giving of CPs the lowering or remittance of the co-responsibility levy occurs in all LFAs of the EC, a comparison can be made between dairy farmers in LFAs and dairy farmers in non-LFAs, or between dairy farmers and non-dairy farmers within LFAs. However when doing such a comparison the groups compared should not be too different; because then the difference in income development will not be brought about by the fact that there is or there is not a lowering or remittance of the co-responsibility levy but by many other factors not included in the evaluation.

If data are available on the implementation of the lowering and remittance of the co-responsibility levy for all the LFAs of the EC-12 the influence of the measure on income development in LFAs will not be too difficult. For the dairy farmers in both LFAs and non-LFAs data on income development have to be collected. Besides it should be determined which part of the income raise has been caused by the lowering or remittance of the co-responsibility levy. If it turns out that income in LFAs is raised more than income in non-LFAs as a result of the lowering or remittance of the co-responsibility levy, the policy makers were right to say that income is raised in LFAs as a result of this measure.

However, if the question has to be answered; if income of dairy-farmers in LFAs would have been raised too if there was no lowering or remittance of the co-responsibility levy, it will be much more complicated. Now LFAs can only be compared with non-LFAs or dairy farmers within LFAs can only be compared with non-dairy farmers within LFAs. In both cases the comparison is only reliable if differences in production circumstances of the farms compared are not too big.

In the next section all the information needed to put the above described testing of the two assumptions into practice, will be described systematically. In this way it is easier to compare the information needed for the testing with the information available at this moment. This comparison will be done in section 7.4.

7.3 Survey of all the information needed for the testing of the two assumptions

For the testing of the first assumption that (1) depopulation occurs less and (2) less land is left fallow in regions with a higher agricultural income, the following information will be needed:

1. Farm and off-farm income per farmer or per hectare for all regions of the EC-12.
2. Data on total agricultural population development within a certain period for all regions of the EC-12.
3. Data on the development of agricultural area or of the development of land becoming fallow for all regions of the EC-12.

For the testing of the second assumption, whether the giving of income support as given under directive 75/268 indeed leads to an increase of farm income in LFAs, a lot more information will be needed:

1. For all LFAs information should be collected on the number of farmers who received CPs and the total amount of CPs paid per farmer in LFAs.
2. The development of agricultural and off-farm income within a certain period for all LFAs has to be determined.
3. The development of farm-size and the development of the number of farmers within a certain period for all LFAs has to be found.
4. Information on all LFAs on the lowering of remittance of the co-responsibility levy, so that the precise influence of this instrument on income development of the farmer in the LFA can be determined.

In the next section of this chapter it is explained where all this information can be found.

7.4 Comparing the information needed with the information available

In the last part of the former section a survey was given of all the information needed to put the evaluation proposal into practice. In this section it will be determined whether this information is indeed to be found.

On EC-level different regional databases have been created:

1. FADN (Farm Accountancy Data Network).
2. FSS (Farm Structure Survey).
3. Databank Region (Eurostat CRONOS).

These three databases can be very useful when collecting data for all regions of the EC.

In appendix 1 a description is given of all three databases in order to get a good picture of the contents.

However when doing LFA investigations on the basis of the three data-basis a problem arises:

The data-bases do not use the same division of the EC into regions. In the study on agriculture in LFAs of the EC-10 (Tamminga, 1991) this problem was investigated. It turned out that when working with FADN and with FSS the problem could be solved. In these databases a variable was given to characterize the area where the farm of which the data are col-

lected in the database is located. This makes it possible to divide the farms from one region into:

- normal;
- mountain, and
- other less favoured areas.

Unfortunately this typology can not be made for data from CRONOS. However a way was found to solve this problem. A division was made of the regions into "non-LFA", "partly LFA" or "LFA", according to percentage of the number of farms that are located in Less Favoured Areas.

In the next part of this section a systematic description will be given of where the information summed up in section 7.3 can be found:

1. Development of the agricultural income of the EC-regions is available in the FADN-database. Data on off-farm income are not to be found in all three data-bases. However, in FSS there are data on the number of farmers working outside their own farm.
2. Population development for all regions of the EC-12 can be found in Databank Regio.
3. The development of the total area becoming fallow for every EC-region can not be found in one of the three databases. However information of the development of total agricultural area for all EC-regions is available in the Data bank Regions and in FSS.
4. Data about the total farmers within all the EC-regions who received CPs as data on the total amount of CPs paid to every farmer in every EC-region are not to be found in one of the three databases. So, information about this must come from other sources, like national statistics.
For the Netherlands these data can be found at DBL (Directie Beheer Landbouwgronden) and at provincial rule. For Germany these data can be found in national statistics published in the different editions of "Agrarberichte der Bundesregierung" and for the years 1985 and 1986 in "Die Verbesserung der Agrarstruktur in der Bundesrepublik Deutschland". For data about other countries of the EC it can be useful to turn to the national Governments.
When collecting data on CPs paid to the different regions of the EC a problem arises. It is possible that data on the payment of CPs summed up by the EC can be very different from data collected by national data. This difference can be explained by the fact that the EC pays the same CP in an other financial year then the Member State does.
5. Data on farm size can be found in the FADN and in the FSS database. However farm size-data of before 1984 can only be found in the FSS-database.
6. Information on how the lowering or remittance of the co-responsibility levy has been put into practice in the different LFAs is difficult to get. In EC-statistics no information about this measure is to be found. The best way to get this information will probably be asking the different Member States for it.
In the case of the Netherlands again DBL and provincial institutions will be the best to turn to.
7. Information on farm structure of farms of the EC can be found in the FADN an the FSS database.

Concluding: For the testing of the first assumption enough information is available in the three EC-databases. For testing the second as-

sumption however, information in the three databases, is insufficient. Therefore the possibility to test the second assumption depends strongly on the possibility to find information on the number of farmers who received CPs and made use of the lowering or remittance of the co-responsibility levy.

8. SUMMARY AND CONCLUSIONS

Main aim of this study is to find a way to evaluate the policy under directive 75/268. This directive has been implemented in the Less Favoured Areas (LFAs) of the EC since 1975. It is the first EC-regional/structural programme for agriculture and is co-financed by EAGGF-Guidance. In the last couple of years expenditure on the programme increased impressively. This can be explained by the reform of the structural funds (1988) and the changes of the CAP. Main aim of this reform is to pay more attention to structural and regional policies in order to strengthen economic and social cohesion in the Community. Although expenditure increased, few evaluation studies have been carried out to determine the effectiveness of the policy under directive 75/268.

In this study a way has been indicated to determine its effectiveness.

In the LFAs the policy under directive 75/268 aims at maintaining a minimum population level and conserving the countryside. These two objectives are to be realised by supporting and increasing income of farmers in LFAs. Income support is given in three ways:

1. by giving farmers Compensatory Payments (CPs), which are paid per hectare or per livestock unit;
2. by giving farmers investment support, and
3. by giving dairy farmers in LFAs a lowering or a complete remittance of the co-responsibility levy for milk.

In practice investment support is hardly given to farmers in LFAs and therefore the evaluation in this study has been mainly focussed on the other two instruments.

According to the theory of evaluation, as described in section 1.2, this study proposes to evaluate directive 75/268 by focussing on the following question: Has a minimum population been maintained and has the countryside been conserved as a result of the giving of income support under directive 75/268?

In this study the possibility to answer this question has been studied and the following conclusions have been reached.

1. In directive 75/268 the policy objectives have not been operationalised or quantified and therefore it is very difficult to determine what the precise objectives are. Before starting an evaluation a way should be found to quantify the objectives. The demographic objective is aimed at maintaining a minimum population. Operationalising this objective means collecting data on population development and determining whether population has increased or decreased in LFAs. However, although we know how to quantify the objective we still do not know what is meant by a minimum population level. In practice it turns out that this level is determined by the EC-Member States and therefore differs between countries. The countryside objective is aimed at the maintenance of the countryside. A possibility for operationalising can be to look at the development of land becoming fallow or at the total agricultural area in a LFA. When total agricultural land remains stable nothing has been changed and the countryside remains unchanged. Main aim of the income support instrument is to increase income of farmers in LFAs and by doing so realising the two policy objectives. However the income support instrument can both be seen as a policy instrument and as a policy objective. When income is not increased the other two objectives will not be realised either. Oper-

ationalising the income objective means collecting data on the income development of farmers in LFAs.

2. Determining the precise influence of income support, as given under directive 75/268, on population development and conservation of the landscape, is not easy. The population development and the conservation of the landscape are determined by many other factors. Information on these factors will also be needed. Besides, it will be clear that income support does not have to be the only and best instrument to realise the objectives. The effectiveness of the income support instrument can be put into question already before an evaluation even starts.
3. Until now few evaluations of the implementation of the directive 75/268 have been done. Therefore little information on the working of the directive is available. This makes evaluation more difficult but also more necessary.
4. A lot of scope is left to the Member States to implement the directive. As a result the outcome of the evaluation can be very different per Member State.

All the above described problems have to be overcome when starting an evaluation. Therefore it was decided that evaluation as described in the beginning of this study would be too complicated. A more practical way to determine the effectiveness of the policy under directive 75/268 was made. Instead of looking at the realisation of the policy objectives, the principles the policy is based on are put into question. If the principles are right the realisation of the policy objectives will also be more likely. Makers of the directive 75/268 started from two principles:

1. A higher income will help to maintain a minimum population level and will help to conserve the countryside.
2. The giving of CPs, investment support and a lowering or remittance of the co-responsibility levy for milk will enlarge the income of farmers in LFAs.

To determine if the first principle is right, information should be collected on income level, population development and the development of land becoming fallow. For all regions of the EC these data have to be combined. If it turns out that in regions with a low income, population loss is bigger and fallow land increases more than in regions with a high income, the policy makers of the directive were right to start from this first principle. Testing this first principle can be done with the information that is available in the three EC-data-bases; FSS, FADN and the data bank Regions.

To determine if it was right to start from the second principle, will be more difficult. For this purpose information on the number of farmers that received CPs, and the number of farmers that got a lowering or remittance of the co-responsibility levy, is necessary. This information can not be found in one of the three EC-databases. Data on this issue are therefore very difficult to get and to collect them for all EC-LFAs will therefore take a lot of time. If this information is collected it should be compared with information on income development for all LFAs. If it turns out that income increased more in LFAs that did receive income support than in LFAs that did not receive income support, the policy makers were right to start from the principle that income support under directive 75/268 leads to a higher income.

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APPENDICES

Appendix 1 Description of the three EC databases FADN, FSS and Regions

In this appendix a survey will be given of the three EC-regional databases FADN, FSS and the Databank Regions. FADN is based on bookkeeping results and FSS on questionnaire results which are both derived from samples of farms within the EC-Member States. The Databank Regions is based on different sources and is mainly concerned with the regional socio-economic situation. In the next sub-paragraphs a more precise description will be given to the three databases.

Farm Accountancy Data Network

FADN aims to collect data on income and on the economic position of farms within the EC. It provides information on the structure of the farm (labour input, herd and crops grown), a balance account and a profit and loss account.

For this purpose bookkeeping results for a sample of farms are collected every year. Not all farms are included, because farms are only allowed to be put in the FADN if they exceed a certain number of ESU (European Size Units). This ESU are based on the SGM (Standard Gross Margin).

If one wants to determine the number of ESU for a farm one first has to determine the number of SGMs.

(Definition of SGM: The value of output from one hectare or from one animal less the cost of variable inputs required to produce that output)

If the SGM for the whole farm is determined this figure is divided by 1200 (ECU) (this was the value of one ESU in 1984, in 1982 it was 1100 ECU). Then one has the number of ESU for a farm. In table 1 a survey is given of the minimum number of ESUs (Economic Size Threshold) a farm has to have to be allowed to the FADN data-network.

The reason that ESU are taken is that this unit indicates if a farm is commercial enough. Commercial means that a farm should be large enough to provide a main activity to the farmer and a level of income sufficient to support his or her family.

A disadvantage of using SGM as an indicator is that farmers in LFAs will be under-represented in the FADN-dates. This is caused by the fact that output per ha. or per animal in LFA will be relatively lower per variable input than in none-LFAs because in LFAs output is depressed more often by natural handicaps. If using FADN-data for evaluating the working of directive 75/268 attention should be paid to this under-representation in FADN.

The sample of FADN represents 90% of the total EC-12 agricultural production and also 90% of the total EC-agricultural area, but only 60% of total number of farms are represented.

Every Member State has 12 months to collect the data from its farmers, but in practice it takes 18 months before the EC has received all data. This is caused by the fact that some States have accounting years that start on different data. If the last Member State has finished its accounting year (June) it will still take another 15 months before all data have been processed and approved by the Commission. So data of the accounting year 1988/89 will be available to users in the month of september 1990. Data from the FADN are available at this moment for the years 1984 until 1990.

For FADN purposes the Community has been divided into 91 regions which are shown in figure A.1.

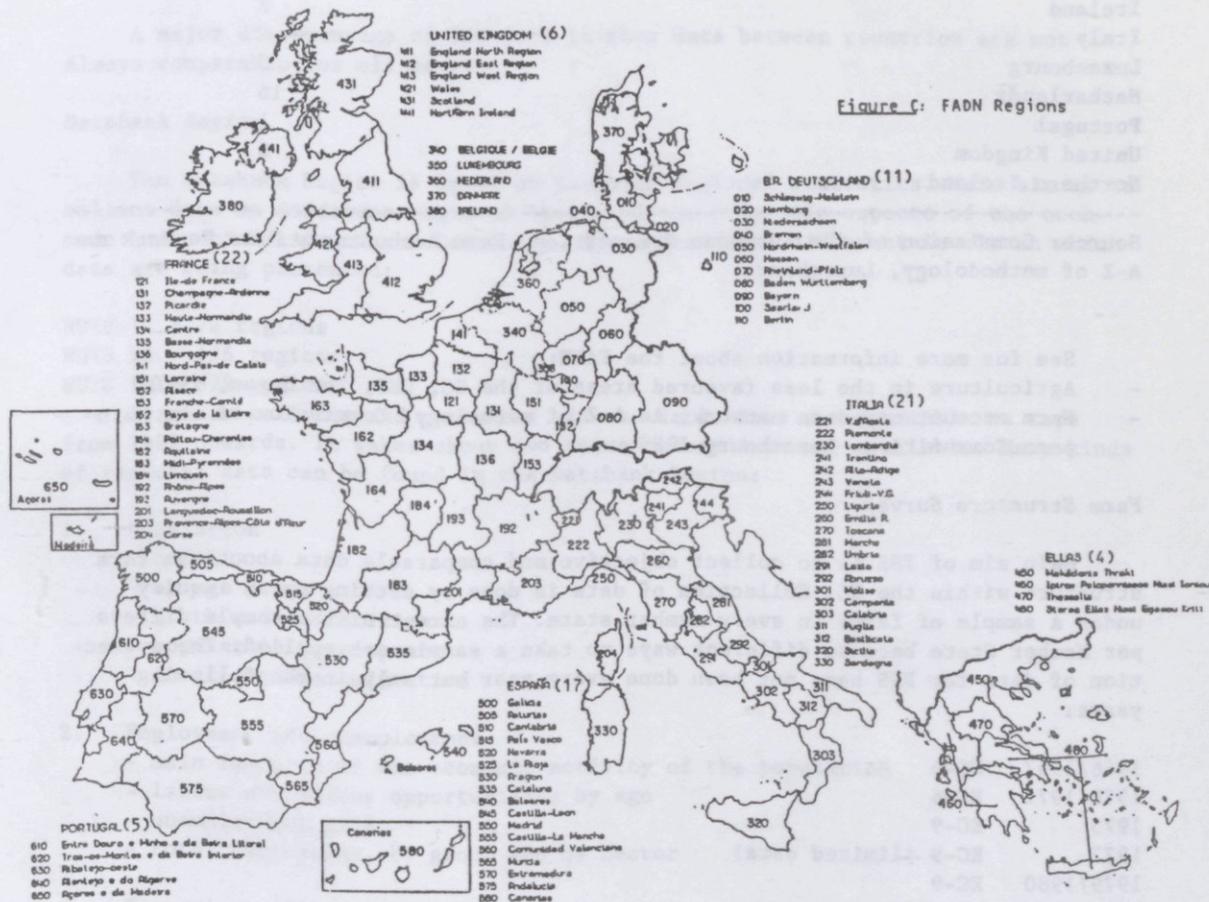


Figure C: FADN Regions

Figure A.1 The community divided into 91 regions
 Source: CEC, Farm accountancy data network; An A-Z of methology, Luxembourg 1989.

Table A.1 Economic Size Thresholds applied by the Commission or every Member State

Country	For 1986/87 accounting year (1100 Ecu of SGM "1982")
Belgium	12
Danmark	8
Germany	8
Greece	2
Spain	2
France	8
Ireland	2
Italy	2
Luxembourg	8
Netherlands	16
Portugal	1
United Kingdom	8
Northern Ireland	4

Source: Commission of the European Communities, Farm Accountancy Data Network an A-Z of methodology, Luxembourg.

See for more information about the FADN:

- Agriculture in the less favoured areas of the EC, LEI, The Hague, 1990;
- Farm accountancy data network; An A-Z of methodology, Commission of the European Communities, Luxembourg 1989.

Farm Structure Survey

Main aim of FSS is to collect objective and comparable data about the farm structure within the EC. Collection of data is done by setting up an inquiry under a sample of farms in every member state. The extent of the sample differs per Member State because different ways to take a sample are applied. The collection of data for FSS have not been done every year but only in the following years:

1966/1967	EC-6
1970/1971	EC-6
1975	EC-9
1977	EC-9 (limited data)
1979/1980	EC-9
1983	EC-10
1985	EC-10
1987	EC-12
1989	EC-12

The periods in which Member States collect data may differ but have to be done within a period of about 14 months. As for example in february 1982 it was decided in regulation 449/82EC that Member States should set up an inquiry into the farmstructure of their country in a period between the 1st of october 1982 until the 31st of January 1984.

Only since 1979 collected data were based on an EC-typology sothat comparison was made more easy. In all FSS inquiries the following data are collected:

- Geographical location of a farm;
- Corporate capacity of a farm;
- The way a farm is exploited;
- Farm management and education of the farmer;
- Farmland;
- Whether there is a garden for own use (not commercialised products);

- Extent of lasting grassland;
- Perennial cultures;
- Other use of land;
- Simultaneous cultures and cultures that succeed each other;
- Cattle;
- Machinery;
- Labour;
- Other activities of the farmer.

All data are published per region. Data are published on tape and are to be found in various Eurostat reports. More information about FSS can be found in various Eurostat reports.

A major disadvantage of FSS-data is that data between countries are not always comparable for all years.

Databank Region

The databank Region is based on Eurostat regional statistics. Main aim is to collect data on different regional levels of the principle aspects of the economic and social life of the Community. There are three different levels on which data are being presented:

NUTS I : 72 regions
 NUTS II : 176 regions
 NUTS III: 829 regions

Eurostat collects and processes all the data. Data are available on tape from 1981 onwards. It takes about two years before data are available. Many kinds of regional data can be found in the Databank Region:

1. Population
 - total
 - by age group
 - birth and death rates
 - population development
 - inter-regional migration
2. Employment and unemployment
 - main features of the economic activity of the population
 - labour and labour opportunities by age
 - unemployment rate
 - total employment, by group and by sector
3. Economic totals
 - gross value added at market prices-total
 - idem by group or sector
 - gross domestic product per inhabitant
 - idem per working person
4. Agriculture
 1. Land use: grassland, permanent cultures and arable land
 2. Areas harvested, yields and production
 - cereals (including rice)
 - soft and durum wheat and spelt
 - barley
 - grain maize
 - potatoes
 - sugar beat
 - fodder maize
 3. Animal population
 - dairy cows

- other cows
- pigs
- breeding sows
- sheep
- goats
- equidea

5. Energy

6. Industry

- number of employees
- mean income per hour

7. Transport

8. Finance

- EC-payments to investments out of for example EAGGF

More information about the Databank regio can be found in Regions, Statistical Yearbook 1989, Eurostat Publication, Luxembourg 1990 (ISBN 92-89-514-5E-C)

Appendix 2 Regional classification of the regions in non-LFA and LFA according to the percentage of farms in less favoured areas

Non-LFA		Partly LFA		LFA	
Region	%	Region	%	Region	%
Bremen	0	Centre (Fr)	30	Ipeiros	60
Hamburg	0	Piemonte	30	Wales	60
Basse-Normandie	0	Emilia-Romagna	32	Sardegna	60
Nord-Pas-de-Calais	0	Baden-Wuerttemb.	32	Ireland	60
Picardie	0	Thessalia	32	Thraki	65
Ile-de-France	0	Niedersachsen	33	Calabria	67
Haute Normandie	0	Rheinland-Pfalz	33	Umbria	69
Brabant	0	Friuli-Venezia	33	Northern Ireland	70
Limburg	0	Lombardia	35	Corse	73
Antwerpen	0	Kentr. Ellas Kai	37	Scotland	74
West-Vlaanderen	0	Sicilia	39	Ionioi Nissoi	76
Oost-Vlaanderen	0	Peloponnissos	39	Basilicata	81
Nederland	0	Namur	39	Liguria	83
Danmark	0	Makedonia	40	Auvergne	86
East Anglia	0	Marche	44	Molise	86
South-East (UK)	0	Aquitaine	46	Midi-Pyrenees	86
Bretagne	1	Toscana	49	Franche-Comte	87
Pays de la Loire	1	Liege	49	Nissoi Aigaiou	99
East Midlands	8	Campania	50	Limousin	100
Champagne	8	Bayern	50	Luxembourg (B)	100
Hainaut	9	Lazio	54	Trento	100
Alsace	10	North (UK)	54	Valle d'Aosta	100
West Midlands	12	Saarland	55	Bolzano Bozen	100
South-West (UK)	13	Abruzzi	55	Luxembourg	100
Lorraine	15	Kriti	56		
Poitou-Charentes	17	Bourgogne	56		
Nordrhein-Westf.	17	Rhone-Alpes	58		
W-Berlin	19				
North-West (UK)	19				
Provence-c.d'Azur	23				
Yorksh./Humberside	24				
Schlesw.-Holstein	25				
Languedoc-Rouss.	25				
Puglia	26				
Veneto	27				
Hessen	29				

Source: Tamminga et al., Agriculture in the less favoured areas of the EC-10, Agricultural Economics Research Institute LEI-DLO, The Hague, 1991.