

Innovations in European Rural Landscapes

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The changing role of farming in a peripheral South European area – the challenge of the landscape amenities demand

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Abstract

The role of farming has been changing in many European rural areas, especially in the most peripheral areas, where production has ceased to be viable or is threatened in the present market context, but the countryside is valued by society through other functions it provides. Within this new paradigm, where the territorial role of farming is stressed, there is a need to understand and assess how the cultural and amenity functions, that nowadays are based in the rural landscape as a resource, depend on the land management undertaken through the farming sector, and how do the users of these functions value the outputs of farming activities. Increasing knowledge on this demand is required for informing new management orientations at the landscape and the farm levels. In order to integrate all factors, innovative solutions to be designed need to have this information as a stepping stone.

In the municipality of Castelo de Vide, in Southeast Portugal, due to specificity of the landscape, there is already a growing demand for cultural and amenity functions. This chapter is based on a survey undertaken in this municipality. Different groups of users of the landscape, representing the various landscape functions, have been considered. The paper shows what are the landscape areas, and within them, the land cover patterns preferred by the different users, for their activity, and what are the landscape elements that influence choices. And through this preference survey, the paper analyses the role of farming for the performance of these cultural and amenity functions, and what may be synergies and conflicts to be considered for future management options.

1 Introduction

The rural landscape depends directly of the transformations by the land use systems in place. According to the OECD nevertheless, rural space cannot

anymore be defined through the importance of the agricultural sector, which has been decaying both in economic and in social terms. Rural areas can be identified through their population density, independently of the economic activity of that population. The increasing importance of other sectors in rural economy can even in the future support farming, if new synergies are developed.

Progressively, the countryside has been turning from a space of production into more a space of consumption – at least in some regions of Europe, the less competitive in production terms, often more attractive as provider of amenities (Holmes 2006; Wilson and Rigg 2003; Wilson 2007). Thus a new concept has emerged, relating to multifunctionality as an attribute of the landscape, rooted in a reinterpretation of agriculture contribution to rural development and the rural space, and the changing role of farmers and a larger community of land managers in the so-called “consumption countryside” (Potter 2004).

Several functions supported in the rural landscape are expected from several users: owners and farmers, hunters, visitors and tourists, inhabitants – both locals and neorurals, those who develop economic activities based on the landscape, nature conservationists and environmentalists, involved technical staff, and many others. The jointness between functions, i.e., the way the several functions relate to each other, positively or negatively, raises fundamental issues for the future management of the landscapes, both for the private and for the public policy sectors (de Groot 2006). For the farming sector, its role in the process of transition of the countryside, facing this new social demand, is still to be defined (Wilson 2007). Many questions emerge that both landowners, at the farm level, and decision makers, at a local or regional level, are struggling today to answer (Durand and Van Huylenbroeck 2003).

These new questions raise challenges for research that demand new types of approaches and eventually combination of methods. As a first step, there is a need to identify the functions and demands, in each specific landscape, i.e. assess what do the new users of the rural landscape look for, or what do they value (Wiggering et al. 2003). This means identifying which pattern best suits their expectations, if the preferred patterns for the various functions are common or divergent, and if they may be combined. There is also a need to assess which functions can be combined in each landscape and which landscapes may support different functions (Wiggering et al. 2006).

Furthermore, as a second step, the renewed role of farming needs to be identified. It is still the agricultural sector which determines the management of rural landscapes, but more and more there is a transition in the dominant paradigm from a productivist to a post-productivist, or non-productivist

perspective (Wilson 2007). The present question is how the various functions supported by the landscapes depend on farming management or could rely on other types of management. And also, facing the reduction of production, how these new functions can contribute for the maintenance of the land use systems in place or the shaping of new ones (Veje et al. 2007).

The present chapter presents and discusses the results of a research project emerging from the above mentioned questions. The goal of the MURAL project was to assess the expectations of various users for the rural landscape in a municipality in the North East of the Alentejo region (Fig. 1). The main question was which pattern (considering the distribution of land cover classes and intensities of uses already in place in the area) best suits each function considered. And also, what type of farming system is more adequate for maintaining the preferred pattern. The groups of users represent the most relevant non-commodity functions that already correspond to a social demand in the area. They stretch from ecotourism and hunting, to new and second residence (neorural inhabitants and people with second residence), weekend stays and cultural identity. Further in this chapter, people with second residence and weekend visitors will be included in the neorurals group, since they share common characteristics (urban people searching for better life quality conditions).

The chapter is structured as such: (1) introduction, (2) characterization of the case-study area – the municipality of Castelo de Vide, (3) methodology, (4) analysis and discussion of results concerning the landscape preferences, (5) discussion on the challenges these preferences raise for the future, and (6) conclusion.

2 The municipality of Castelo de Vide

The municipality of Castelo de Vide is located in the Northeast of the Alentejo region, close to the Spanish border (Fig. 1). It is integrated in São Mamede Natural Park, also a Natura 2000 site. Due to the presence of the mountain chain in the South of the municipality, there are some high points, as São Paulo (700 m), Facho (762 m) and Urra (782 m). Among its major water resources, there is the Sever River, tributary of the Tagus River. The Sever River serves as border between Portugal and Spain. The municipality of Castelo de Vide covers a territory of 264 km², with a total of 4144 inhabitants in 2000, and a very low density of population (15.64 hab/km²). This municipality has been classified as an area of *extensive agriculture with environmental quality, in diversified territory*, according to the typology established for the whole country concerning the dynamics

and changes of rural areas in Portugal (Pinto-Correia et al. 2006; Pinto-Correia and Brennan 2008). This means that it has a diversified landscape with conservation and environmental values, with potential for a multi-functional use, maintained through extensive farming systems, threatened now by the globalization processes going on.

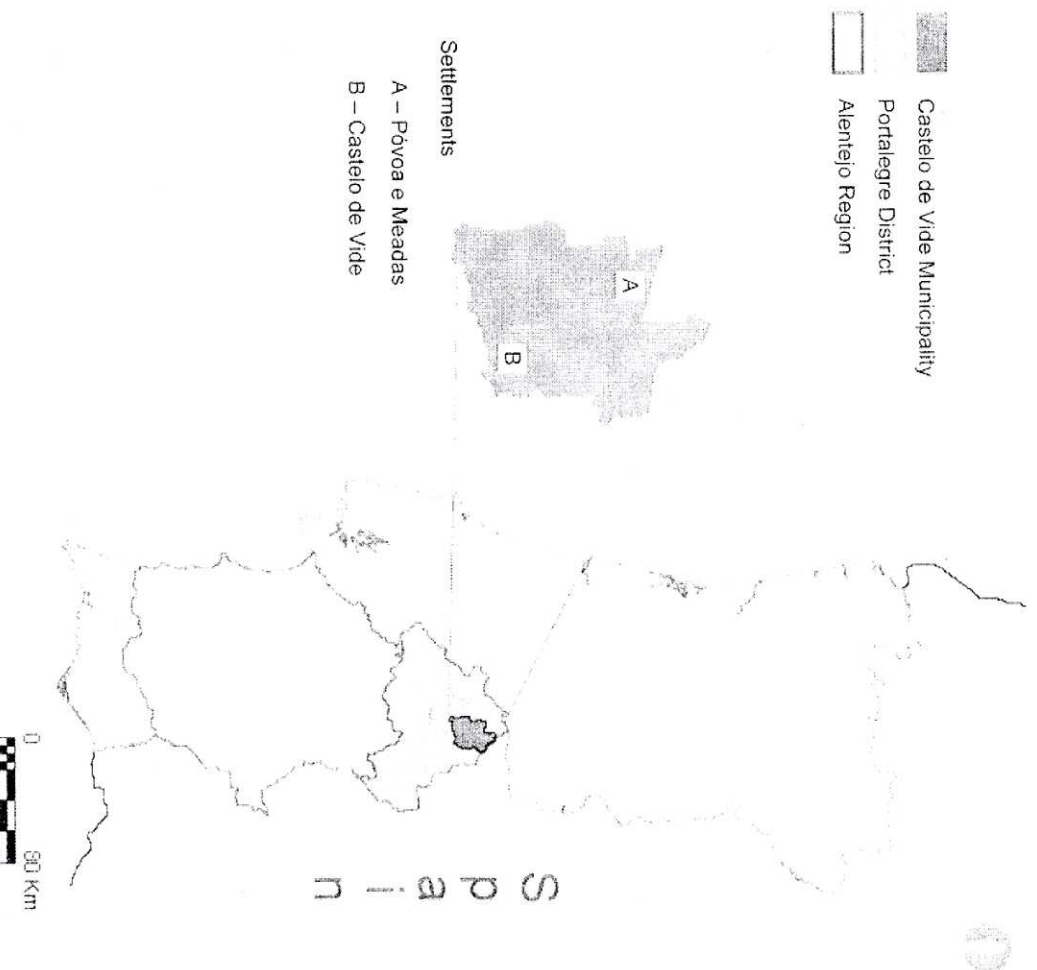


Fig. 1. Location of Castelo de Vide's Municipality.

It is also a municipality where land cover has been rather dynamic during the last years, resulting mainly from the extensification processes of the silvopastoral systems, but also from the forestation of agricultural areas. On the other side, it is a diversified area, with wild and poor areas close to the Sever River to the North, silvo-pastoral systems in large properties in the centre, small scale mosaic around the town of Castelo de Vide, and the mountain hills of São Mamede (Pinto-Correia and Primdahl 2009). The combination of the biophysical conditions and extensive agriculture has culminated in diversified land use patterns. Archaeological sites, religious

monuments and other man made elements add a heritage value to these already humanized landscapes. Also the presence of rock outcrops has resulted throughout time, in the construction of stone walls, contributing once again as a valued cultural element to the landscape.

Due to this diversity, a particular climate, more mild than in the surroundings due to the proximity of the São Mamede mountain, and also its cultural heritage, the municipality has been attracting since some years ago diverse types of users, both for recreation as for week-end stays and even settlement of neorural inhabitants, both Portuguese and foreigners.

3.1 Landscape character areas

Four landscape areas have been identified (Fig. 2): (a) Schists, (b) Agro-Silvo-Pastoral, (c) Olive grove mosaic, (d) São Mamede Hills.

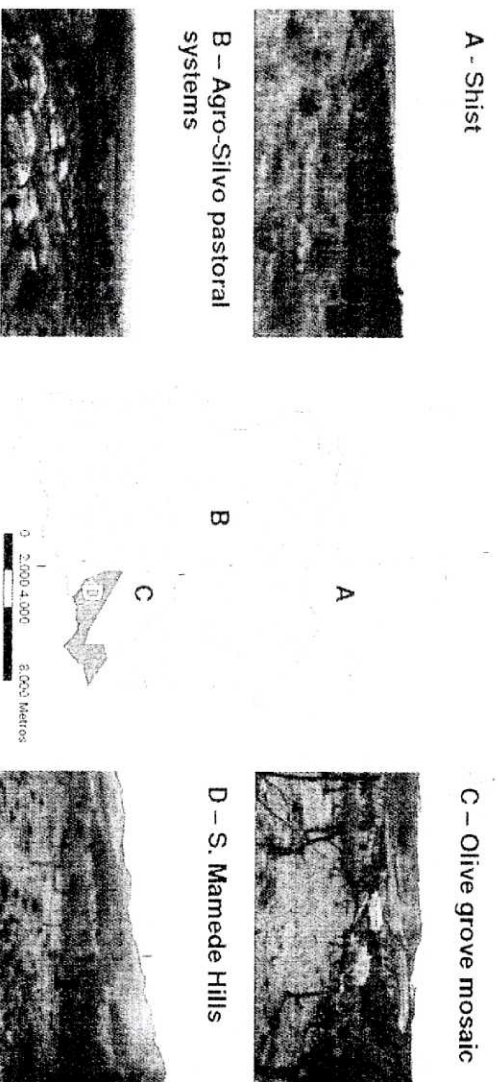


Fig. 2. Landscape areas of Castelo de Vide's municipality.

The *landscape area of Schist (A)* has a very open and harsh character, which can be explained by its very poor soils developed from schist rock, and the consequent vast extension of shrub areas, areas of dispersed tree cover of cork and holm oak *montado* (the silvo-pastoral system characteristic of the whole region of Alentejo) and fast growing forest areas (Eucalyptus). The properties here are very large (>100 ha) comparatively with the other landscape areas. There is a high potential for nature conservation and hunting.

The *Agro-Silvo-Pastoral landscape area (B)* represents the biggest landscape area in the municipality. Pastures are combined with high and low shrubs, broad leaf and evergreen oaks, annual cultures and rock outcrops. Livestock production is the main activity. These elements can be found all over this area, however the densities in which they occur can

change very much, providing more open or more closed areas, though maintaining the same landscape character.

The *landscape area of Olive Grove Mosaic (C)* represents the area where the municipality town, Castelo de Vide, is located. Surrounding the village, mainly to the north, there is an area of smaller properties (<20 ha), with olive groves, vegetable gardens, fruit trees and vineyards, resulting in a very diverse, dynamic and living character mosaic landscape. There is a decrease in vegetable gardens and an increase in permanent cultures, as the olive groves. This trend follows along the increase of neorural inhabitants, searching for a better life quality, but not connected to farming. Prices of land here are high, as the pressure for building or restoring houses is high.

The *landscape area S. Mamede Hills (D)* corresponds to a small part of the Mountain of S. Mamede, which continues further south-east. The distinct character of this area has mainly to do with the presence of the hills, which create a microclimate, more humid and with higher precipitation than the surroundings. There are areas of shrub, and also oaks and chestnut trees, but a large part of this landscape area is covered by monospecific forest plantations, of pine trees mainly. Some have been affected by fires in the last years.

2.2 Main changes

For the whole area, an analysis of the land use change and dynamics from 1968 to 2005 (Fig. 3), shows a strong increase of shrubs, especially between 1980 and 1995, and also of permanent crops and of forest areas. On the other hand there is a decrease of annual crops. These changes reflect a trend towards an extensification of the land use systems, even if the components of the system are kept the same, at the landscape level.

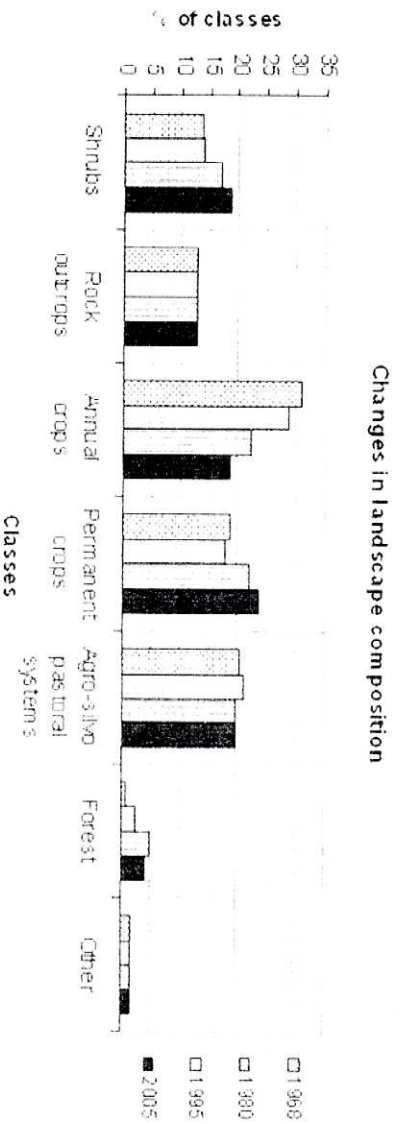


Fig. 3. Changes in the landscape composition in 1968, 1980, 1995 and 2005 (Santos 2007).

The farm number and average size have also been changing. The number of farm units has decreased from 1989 to 1999 (Table 1), but the average

area and dimension of the farms has increased (average size farm – 28 ha in 1979 and 68 ha in 1999), which proves a trend to concentration of farms, which can be more competitive. The number of farm units with less than 5 ha, decreased considerably, in 20 years it has been reduced to less than half. On the other hand, the number of farm units with more than 100 ha, increased (Table 1). Also the number of farmers with an income exclusively or mainly from the farm has been decreasing. The total of farms with an income from an external source has increased, underlining the loss of competitiveness of the farms, and the need of landowners to seek for other incomes.

Table 1. Dimension of the property and number of farm units in the municipality of Castelo de Vide, in 1979 and 1999 [Source: INE – RGA/99 (<http://www.ine.pt>)].

	Year			
	Municipality of Castelo de Vide 1979		1999	
	N° Farm units	Area (ha)	N° Farm units	Area (ha)
Without SAU	1	–	–	–
0–5 ha	335	531	150	293
5–20 ha	79	735	42	364
20–100 ha	69	3314	55	2847
>100 ha	29	9591	57	17,206
<i>Total</i>	513	14,171	304	20,710

Concerning size, the small farm units (0–5 ha) are many; however they occupy a very small area (1%). The number of medium (20–100 ha) and big (>100 ha) farm units is rather low (37%), though occupying 97% of the total area.

Concerning farming systems, two main types must be distinguished (Figures 4 and 5): (1) the large farm units with extensive silvo-pastoral systems, and (2) the small farm units related with olive groves, in a mosaic with grazing, vegetable gardens, fruit orchards and vineyards. In large properties the cattle production for beef is dominant, while in the small property two management types can be found: the maintenance of the traditional farm system, today as a hobby activity, and combining olive oil with sheep production; and the innovation by neorural inhabitants, who maintain an increasingly extensive system and introduce some innovation, but without market objectives. Here the second homes, or new houses for neorural inhabitants, are progressively larger in number.

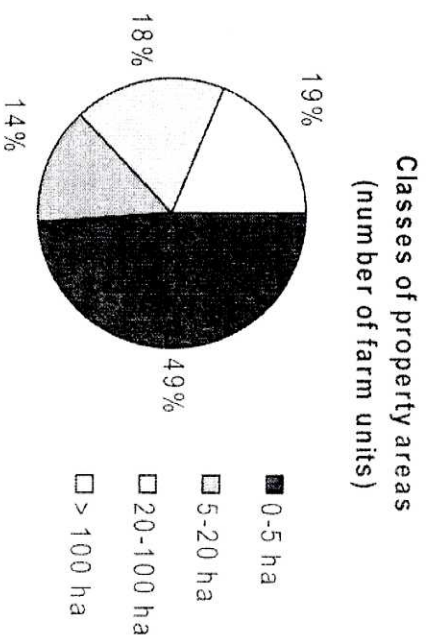


Fig. 4. Classes of property areas in the Municipality of *Castelo de Vide* [Source: INE – RGA/99 (<http://www.ine.pt>)].

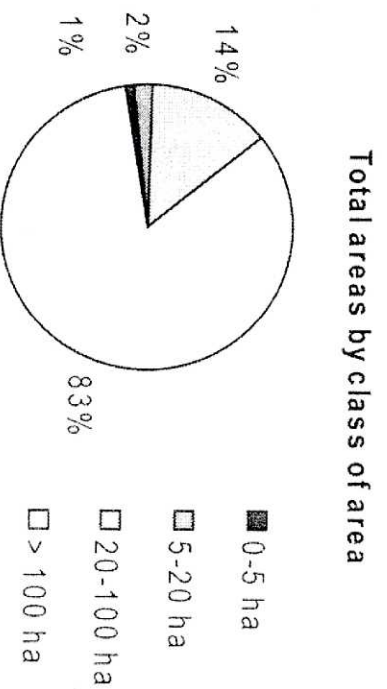


Fig. 5. Percentage of the total area by class of area [Source: INE – RGA/99 (<http://www.ine.pt>)].

3 Methodology

The methodology applied can be divided in several phases: (1) characterization of the municipality of Castelo de Vide, biophysical and socio-economic conditions and the land use systems in place; (2) identification of the non-commodity functions, particularly the cultural and amenity functions, that are more relevant today; (3) identification of different landscape areas in the municipality; (4) selection and manipulation of photographs representative of each landscape area, and representing the various land use combinations and intensities in each landscape area, to be used in enquiries; (5) definition of the enquiry and of the sample of users; (6) enquiries; (7) data analysis and discussion: opening up for the sequence process of the diagnosis – dialogue and joint action – exchange and evaluation.

3.1 Characterization of the municipality of Castelo de Vide

The biophysical and socio-economic characterization of the municipality was based on published information, as well as statistical data and maps, on soils, morphology, farm structure, land cover, population, demography and sectors of activity, etc. For the understanding of the land use systems, the first and more general information was obtained from key-persons interviewed in a first step of the study, as staff from the agricultural administration and farmers associations. More detailed information was obtained from the interviews to a sample of land owners, covering all types of farm units in the different areas of the municipality.

3.2 Identification of relevant cultural and amenity functions

The identification of the most relevant non-commodity functions that reflect a direct and explicit social demand, as cultural and amenity functions was based on a first round of open interviews to local key people. The interviewed were elected people at the municipal level, technical staff and responsible people from the sector organizations as the agricultural administration and the office of the Natural Park of S.Mamede, and also from local NGOs, and also experts who previously have studied this municipality from a socio-economic and cultural perspective. Those interviewed expressed what are the activities and processes going on already in the municipality concerning the countryside, and how the area was seen from those who demand it and from those who live there. The following functions were selected: hunting, ecotourism, settlement of neorurals (including second residence owners and weekend visitors), and also the cultural identity (local inhabitants).

3.3 Identification of landscape areas

A first delimitation of the landscape areas was based on literature about the municipality and the crossing of maps with information on the biophysical (morphology, altitude, hydrography, soils, etc.) and socio-economic (settlements, property structure, heritage buildings) characteristics. Fieldwork complemented the analysis, and a first definition of the landscape areas was achieved, following landscape character assessment criteria applied at national level (d' Abreu et al. 2004). This definition was adjusted through a survey based on photographs representative of each landscape area identified. The survey was composed by a questionnaire to 35 local inhabitants distributed geographically in the municipality, and also along ages, gender and profession. The final landscape areas were then defined, after adjustment of composition and limits to the opinions expressed by the locals.

3.4 Photographs representing each landscape area

The land cover pattern within each landscape area is known, from the land cover maps COS 2000, produced at 1:25 000 for the whole country. The land cover classes and the pattern of distribution in each landscape area were identified, with focus on the most represented classes, the dominant class and the most frequent combinations. Photographs of the whole municipality area and all possible land cover classes and land cover combinations were obtained with a few days interval (Spring 2007) so that the season and atmospheric conditions were similar in all photos. The aim was to obtain photos that could be considered as representative of each of the four landscape areas and, within each area, of the land cover types most significant (Dramstad et al. 2006).

Photographs were used as visual stimuli, as they offer a reliable tool for characterizing preferences on different types of landscape patterns (Val et al. 2006; Dramstad et al. 2006; Tit et al. 2007). Nevertheless, taking in consideration the fuzziness of this extensive Mediterranean landscapes, and the need to distinguish between different levels of intensity which do not in reality correspond to very sharp differences in the land cover, computer edited photographs are more indicated than real photographs for obtaining a clear preference distribution (Surova and Pinto-Correia 2008). Edited photographs also make it possible to control the exact aspects and elements to be distinguished.

Each of the four landscape areas was treated separately. Representative photos of each landscape area were grouped, and from those, one single was selected by the team, as the photo that best could represent the landscape character of that area (Val et al. 2006). With this photo as the basis, new versions were produced through manipulation. The final photos, for each landscape area, have the same background, the same horizon levels and the same sky. Each photo shows a specific land cover class, so that the set of photos covers all those which are relevant in the area, in the relevant levels of intensity. The homogeneity of the photos concerning the background aims at concentrating the attention of the respondent on the components and elements that really matter for the survey objectives (Al-Kodmany 1999).

Further, other landscape elements that are present in this municipality, both natural (rock outcrops) and cultural (stone walls, farm houses, paths, cattle, village), have also been added to other versions of the same photos, so that they also could be object of choice by the enquired. The selection of these elements was based on results from a previous survey, also about users' preferences, but based on real photographs, taken in all points of a grid covering a stratified random sampling of the municipality area (Ramos and Teixeira 2006).

In the present study, from the whole four landscape areas, a total of 69 photos were produced, with different combinations of land cover class, intensity, and presence or absence of the above mentioned elements (examples in Figs. 6, 7, 8 and 9).

3.5 Enquiry and sampling

The enquiry contains a first section for the characterization of the enquiry, and two other sections. The second section concerns the selection of the photographs and reasons for the choice, in several steps; first between the four landscape areas, and then, in each of them, the preferred land cover class, level of intensity of use, and the presence or absence of elements. The third section concerns the representations and expectations for the landscape in the area – data that will not be analysed in the present chapter.

As to the sample, individuals related to each of the functions were considered: (a) hunting; (b) ecotourism; (c) settlement of neorurals (including weekend residences and weekend visitors); (d) local inhabitants, and (e) land owners/farmers. The last ones were also asked about the management of their farm unit. Each person was enquired as representative of one of the functions considered in the analysis. For example, a hunter, or a ecotourist, may also be a local inhabitant, but if he is approached as hunter, he is asked to reply as a performer of that activity. The same for neorurals, they may be also landowners, but when enquired as neorurals, it is in this role they should reply. And this distinction has proved to be very well understood.

The sample was built by direct contacts, through a snowball process, starting with key-informants. This approach depends on long stays by the team members in the municipality, as personal contacts are crucial for the quality of the sampling. The objective was to obtain a purposeful sampling, according to the principle of the maximum variation (Patton 1990), with a minimum of $n = 30$ for each function. The enquiries were done directly by members of the project team, in two phases: May and June 2007 for the farm management inquiries and between April and June 2008 for the landscape preferences survey. A total of 208 enquiries were done.

3.6 Data analysis

Data was analyzed in two steps. The first considering separately the enquiries in each user group, through a descriptive statistical approach, where the preferences within each group were identified. First the preference in-between the four landscape areas. Than for each landscape area, the preferences in-between land cover types, levels of intensity, and the

elements present. The distribution of the reasons for choices has also been analysed here in the same way.

The second step of the analysis included all enquiries, through a multiple correspondence analysis, considering as active the variables related to the preferences expressed, concerning the choice of photos, and as passive, or explanatory, all other variables, both those related with the profile of the respondent and those related with the reasons for the choices presented. The multiple correspondence analysis organizes all data in groups of characteristics and responses, being the active variables those who define the groups and the passive those which illustrate the profile of the group.

This analysis is the core of what can be considered as the diagnosis phase, concerning landscape values and management. On the basis of this assessment, proceeding for dialogue and joint action is the next step. An open meeting has also been organized, where the diagnosis has been presented and discussed with all participants. The development of dialogue process and of joint action and, later, of exchange and evaluation involving all parts, is a next step that was not reached by this research, at this phase.

4 Landscape preferences by different users

4.1 Preferences group by group

The enquired didn't show any problem in choosing in between the photos representative of the four landscape areas, and the results of the survey are extremely clear. As it can be seen in Fig. 6 preferences are rather divergent.

The landscape area of São Mamede Hills (D), the mountain area in the southern edge of the municipality, is one of the less chosen, except by the neorurals. For those, the reasons pointed for choosing this area refer mainly to the presence of the hills, the aesthetical aspects, and the nature associated. Not surprisingly, the most well cared landscape, the Olive Grove Mosaic (C), is quite much preferred by neorurals, but undoubtedly the most preferred by landowners and local inhabitants. These groups express a preference for a more humanized landscape, with small open areas and arable land. This landscape is also chosen due to the proximity to the village. The olive grove landscape corresponds to a rather small area in the municipality, close to the town of Castelo de Vide, but though the most frequently preferred. The proximity to the town and the density of occupation and population settlement is certainly related to this preference pattern.

The Agro-Silvo-Pastoral landscape (B) is the largest in the municipality, occupying most of its area. Nevertheless, it is only mostly preferred by hunters and ecotourists. Their preference is due to the diversified pattern (mixture of open and closed areas), and also the more “naturalized” character of the silvo-pastoral systems, in relation for instance with the small scale olive groves of the area C. Other reasons for these choices however differ considerably among hunters and ecotourists. The hunters chose this area mainly because they relate it with a variety of game species; the ecotourists chose this area mainly by aesthetics and associations with nature, in its bucolic dimension. The landscape unit of Schist (A), is also quite much chosen by hunters and ecotourists, mainly for the same reason as the landscape from area B. This area is the less preferred, what can be explained by its harsh nature, lack of qualities for production, and also the weak relation of the locals with what is seen as periphery in the municipality. In sum, areas A and B occupy most of the municipality, but they are in fact only much appreciated by hunters and by ecotourists and, within those, mainly by foreigners or at least people from outside the region.

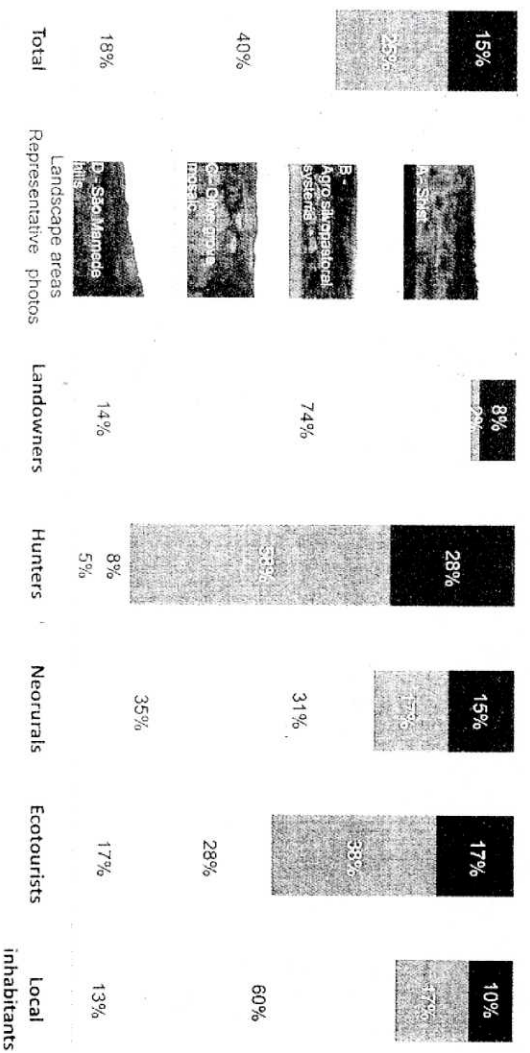


Fig. 6. Distribution of preferences, by the different groups of users, concerning the representative photographs of the four landscape areas (A, B, C, D) and the total percentage of chooses for each photograph. In some groups of users the sum does not give 100% because in some cases was not chosen any photo.

Concerning the preferences within each landscape area, between various land use intensifies with different elements, some interesting results can be explored. For instance, within landscape area B, the most open montado was the most chosen, both by landowners and neorurals, however with different combinations of elements, explained by specific reasons. The reasons are directly related with the functional relation of the group with the landscape (Fig. 7).

Landscape area - Agro-silvo-pastoral systems

Landowners	Neorurals
Elements	Elements
Cattle + House	Rocks
Reasons	Reasons
Higher capacity for occupation/intensity	Aesthetic and sensorial aspects
Land occupation	Nature/Natural aspects
Land form/Physiography	Species/Biodiversity



Fig. 7. Landscape area B, represented by the open Montado: elements chosen, by landowners and neorurals. To the left the signs of a more human used landscape, the house and path and cattle (preferred by landowners) and to the right the signs of a more naturalized landscape, the stone outcrops (preferred by neorurals). The reasons for the preferences are also expressed.

In the area B (Fig. 8), the different types of land cover and intensities of use correspond to a clear distribution of preferences. The *Montado* system, in its various forms, gathers more interest than the open areas with no trees. As for those, the area of grazing with dispersed shrub, corresponding to natural pastures, the most common in the area, is almost not chosen. As for shrub, it becomes more interesting, for hunters mainly, and also for ecotourists – but it is never chosen by landowners, and only some few local inhabitants and neorurals chose it. The open *Montado*, which expresses a better cared management and an on-going livestock production, is the most preferred land cover type in this landscape area. Especially for landowners, together with the open *Montado* of *Quercus Pyrenaica* (a more specific type of this area), this is with the most attractive land cover. Neorurals, ecotourists and local inhabitants have, concerning this landscape area, a similar preference distribution, concentrated on open *Montado*, *Montado* with shrubs and just shrubs. Nevertheless, locals chose very little stone outcrops as diversifying elements (Table 2), and prefer the images were all other element, signs of human occupation, are present. Ecotourists, on

another side, appreciate quite much these stone outcrops. Landowners and hunters are again the groups with most well defined or specific choices, in relation to the remaining groups. Also the choice of elements shows this specificity (Table 2): hunters chose massively the stone outcrops, interesting as game refuge, and never cattle or houses; landowners chose more cattle and the house, sign of human occupation, and farm production.

Table 2. Distribution of preferences, by the different groups of users, concerning the elements and combination of elements chosen for the Landscape Area B – Agro silvopastoral systems and the Landscape Area C – Olive grove mosaic. In grey and black are indicated the elements that have been particularly most chosen, by each group.

	Land-owners (%)	Hunters (%)	Neorurals (%)	Ecotourists (%)	Local inhabitants (%)
n/a*	2	0	2	0	0
No elements	8	22.5	19	10	10
Cattle+rock					
outcrops+house	8	0	17	22.5	33.3
Rock outcrops					
+house	4	5	10	10	23.3
Cattle+house	56	0	6	2.5	6.7
Cattle +rock					
outcrops	0	0	4	7.5	3.3
House	12	0	15	5	10
Rock outcrops	0	72.5	23	37.5	13.3
Cattle	10	0	4	5	0
Total:	100	100	100	100	100
Landscape area B					
Agro-silvo pastoral systems					
Landscape area C					
Olive grove mosaic					
n/a*	4	0	2	0	0
No elements	2	65	0	7.5	7
House+sheep					
+village	62	0	25	27.5	57
House+village	6	0	6	7.5	13
Sheep+village	4	0	15	15	10
House+sheep	12	0	0	0	0
Village	2	32.5	48	40	10
House	4	2.5	0	0	3
Sheep	4	0	4	2.5	0
Total:	100	100	100	100	100

* not applicable - when inquired not choose a photograph in the previous question

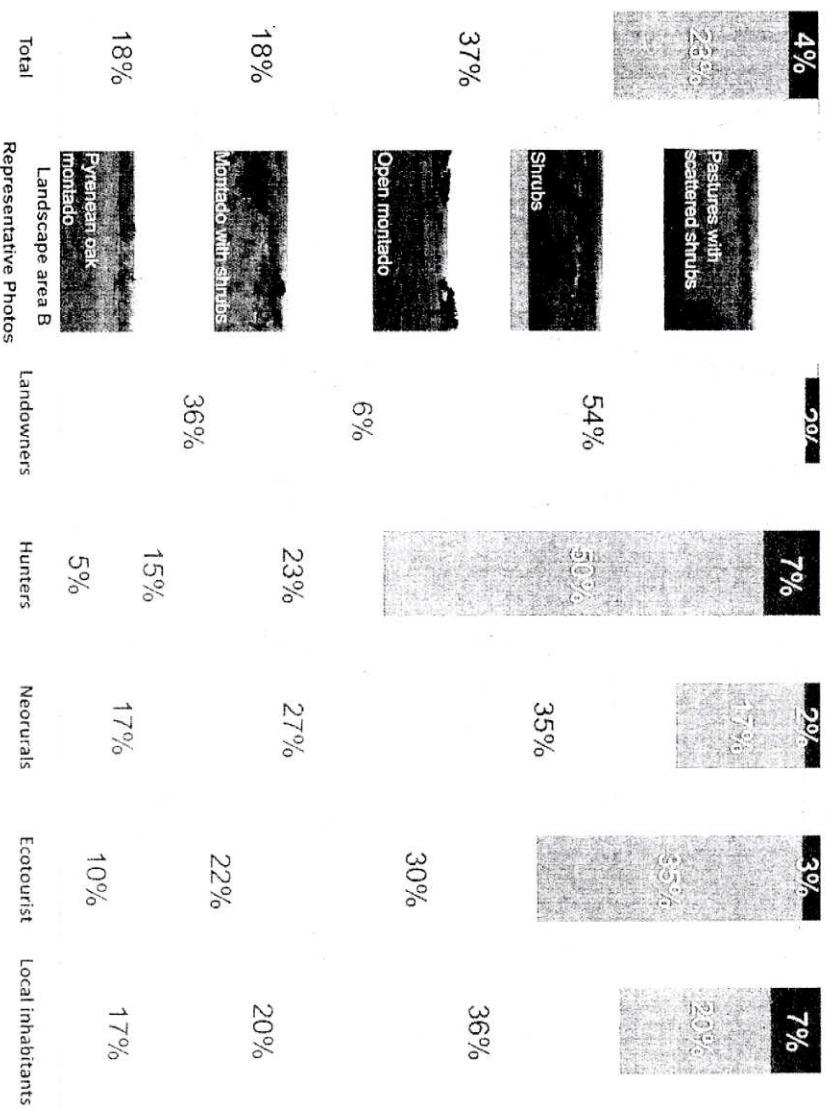


Fig. 8. Distribution of preferences, by the different groups of users, concerning the photographs of Landscape Area B – Agro silvopastoral systems and the total percentage of choosers for each photograph. In some groups of users the sum does not give 100% because in some cases was not chosen any photo.

In area C – Olive Groves (Fig. 9), landowners, as expected, chose the land cover that gives them more guarantees for farming production: the intensive olive grove. Once again the hunters and ecotourists are in line choosing the one that is more naturalized, the extensive olive grove; however this choice is due to different reasons. Neorurals and the local people in this case chose the mosaic, where olive grove is combined with patches of open pastures, mostly because of aesthetics and diversity. Regarding the elements chosen in this area (Table 2), there are also major differences in the choice made between the various groups of users.

As can be seen in Table 2, hunters stand out completely from the other groups, also in the choice of elements in the landscape for landscape area C, since they chose the photos without any element involved. This is mostly because both the livestock and the proximity of people interfere with the presence of the game. Landowners are once more in line with the local inhabitants and they tend to choose the full range of elements (the view to the village, the sheep, and the houses). This choice is primarily due to its local identity, as the locals like to see the elements they always knew in this landscape. The proximity to people is something important for these

two groups, since it gives them some security and wellbeing, opposed to isolation. The neorurals and ecotourists in this case are in close association because their choices are similar, considering the village alone as the most important element. They like this small scale pattern but prefer the slightly more quiet landscapes, a bit isolated, with no evidence of human presence. The town is an element that aesthetically fits well in the landscape but is far enough to permit still the feeling of isolation and quietness.

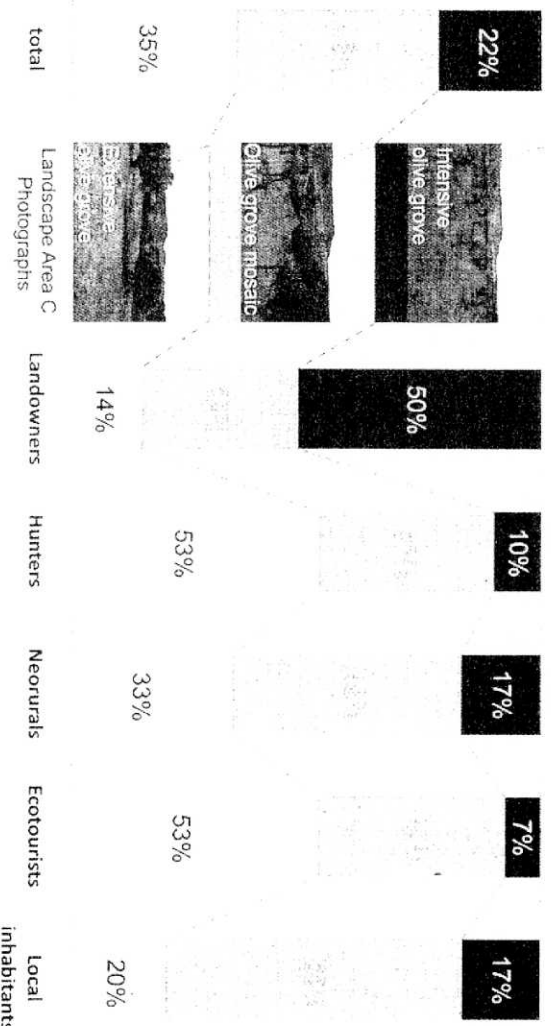


Fig. 9. Distribution of preferences, by the different groups of users, concerning the photographs of landscape area C — Olive Grove Mosaic and the total percentage of chooses for each photograph. In some groups of users the sum does not give 100% because in some cases was not chosen any photo.

4.2 The multiple correspondence analysis: preferences and expectations of all enquired

The analysis based on a multiple correspondence analysis showed the emergence of six groups of users with different preference patterns. These are not the pre-defined groups that were covered by sample for the enquiries, but other groups, emerging from the analysis, where all cases were considered and analysed together, and in relation to each other. There are nevertheless close correspondences in between the groups.

Group (1) Hunters: Related with hunting, where farming is recognized to be important to maintain a diversified land cover pattern (open areas combined with some dispersed bushes). This group prefers more naturalized landscapes, without human elements, and tend to choose the photos according to the conditions for the game species. Concerning the elements, hunters have a tendency to choose the rock outcrops because some game species use them as refuge, and they rarely chose other elements like cattle, houses, and view to the village.

Group (2) Foreigners: Related with foreign people: mainly based on the environmental quality and an appreciation of the natural heritage, with a bucolic appreciation of what is seen as nature. These people prefer extensive areas, connected with natural spaces. They also attach a lot of value to cultural heritage elements like the village and stone walls.

Group (3) Young outsiders: Related with younger neorurals and ecotourists, many of them students, and female. The preferences are mainly based on the esthetical quality and a search for nature experiences. Like the group before, they tend to prefer extensively used areas with the presence of historical heritage elements.

Group (4) Ecotourists: Related with ecotourists. The preferences are mainly based on diversity. They acknowledge the role of farming as the main activity building the landscape, so they tend to prefer farming landscapes, where the human action is clear, and combining some nature and cultural heritage.

Group (5) Locals: Related with local inhabitants. Most of them are female, and have a low education level. They tend to use the landscape for leisure activities related with nature. This group prefer humanized landscapes where farming practices are still a determining factor. They like to see all elements that contribute to the local character: cattle, rocks, houses and view to village. The preferences are mainly based on the esthetical quality, and a lot of value is given to the local historical and cultural heritage.

Group (6) Farmers: Related with farming. There is an expectation in relation with farming, considered as fundamental for this landscape and the countryside as a whole. In general, this group prefer more open landscapes, with arable land, with cattle, and human elements (houses, village, etc.). The reasons for their preferences are always connected with a higher capacity for occupation/intensity, land occupation and land form/physiography.

The results show a clear definition of the preferences by hunters and by farmers, which can be opposed. The other groups are less well defined, as the above analysis shows. The original groups of users are subdivided, and may have mixed preference distribution. Nevertheless, even if the type of user (hunter, neorural inhabitant, owner of a second home, ecotourist, local inhabitant, and farmer) has not been determinant for the construction of this analysis, the various representations and preferences are associated with the groups of users. This confirms that the groups considered do really correspond to different preferences and expectations for the rural landscape:

The analysis could be deepened much further. In this first attempt, it is possible to understand the various preferences and how they correspond to different land cover patterns, and therefore also to different land use systems, or different levels of intensity of the same land use system. Furthermore the reasons for the preferences have in some cases been more determining for the coherence of the groups than the landscape pattern by itself. This means that the groups are searching for specific goods and services in the landscape, which can be associated with various landscape patterns – within the possibilities in this municipality. For instance the neorurals seek for a more extensive management and more naturalized environment independently from the land cover itself.

5 Discussion: management challenges for the future

5.1 Diagnosis

The research done in the municipality of Castelo de Vide, on landscape preferences, confirm that significant differences emerge from each function group (Rogge et al. 2007), but also according to socio-economic background (education, gender, nationality) and to landscape features (openness, wilderness, diversity, man made constructions, etc.). Thus, not only the different users look for different landscapes, but also one particular landscape may support different functions for different people (Heilig 2003). Even more interesting than the preference distribution is thus the identification of the reasons for the choices, which leads us to the understanding of what are people looking for in the landscape they use – so that the unavoidable change for the future can be best oriented taking care of the social demand from various sides.

In general terms, landowners prefer the most open landscapes (no bushes and no rock outcrops), with the type of land cover corresponding to more profit. On the other hand, neorurals tend to value more extensive farmed landscapes, even when they also are landowners. Neorurals can be settled in the town, but also frequently in a small piece of land in the surroundings of Castelo de Vide, i.e., in the area corresponding to landscape area C.

From the land management point of view, landowners and neorurals (who also can be landowners) are the two main user groups more directly connected to farming. However, each group background; define whole different goals and ways to manage the land. These differences are already producing changes in the landscape.

The more traditional landowners have been responsible for the present multifunctional landscape – built upon production function only. Though, the enquiry on the land management at farm level has revealed a low capacity for innovation and low interest in other functions besides agriculture and hunting, what contributes to the maintenance of a strong dependency from the agriculture activity, where the main economical income has been originated.

Within the large scale properties of landscape area A and B, some strong trends seem to shape already the future of agriculture on these areas, as a result from both global and local factors. These point in the sense of decreasing competitiveness and decreasing support, and thus agricultural extensification or abandonment. Only hunting seems to be an alternative or complementary activity considered by large landowners – but it does not correspond to an income source capable of supporting land management on its own. The function ecotourism also underline the preference of more extensive and naturalized farmed landscape, and there may be an overlapping of interests. In fact, hunters and ecotourists prefer the same landscapes but for entirely different reasons. Hunters prefer the landscapes connected with the species they like to hunt, while the ecotourists prefer landscapes mainly for aesthetic purposes and nature expectations. Nevertheless, both groups prefer low disturbance landscapes with scarce presence of humans. Similar areas can be interesting for the two functions, but conflicts may also emerge – each group would prefer to be alone in the landscape. Further, the landowners don't take advantage in the same way of these two functions, as only hunting is considered seriously. Nevertheless, there may be solutions supported on the combination on very extensive farming, with quality products to be sold in the market, and both hunting and ecotourism activities, managed in combination, at the landscape level. These are also the type of landscapes that, in this region, present highest conservation interests, and therefore also conservation goals may be coincident. A new mode of rural occupancy, as described by Holmes (2006), combining in a specific balance protection, production, and also consumption, can be the solution for its future management. Here farming should be adapted to the other functions which may be valuable in the area, and as such also supported by these functions (Holmes 2006). The new solutions need still to be designed, and the landowners supported in implementing them.

As for what concerns small farms, the ageing of traditional farmers and the lack of incentives for the young generations regarding agriculture may increase the trends referred above. On the other hand, the small farms are being purchased by neorurals and as second houses for weekends and holidays. The unintentional multifunctional landscape built by traditional

farmers, in a small scale property structure, has become a strong attraction factor for outsiders. The new housing in this area has become a high potential function as a result of the existent landscape. And the new owners have a different attitude, other environmental and aesthetical concerns, and a different capacity of innovation and investment, since the main economical income is independent from the land property. There are contrasting trends coming out of this new type of ownership. Some new owners aim for an intentional multifunctional and extensive logic, which results in the increase of bushes and other vegetation, and thus a changing character in the landscape and higher risk of fires. Some others, both those who chose to live there and week-end visitors, are aware of the value in this landscape and the need to care for the traditional uses, and maintain traditional olive groves, or even recover shrub covered areas, or even plant new areas, or start new orchards or vegetable gardens. Nevertheless, the landscape is changing, as it is turning more in the sense of a low density residential area. With urban new owners comes also the enlargement and architectural changes of the traditional existent houses. Shrub patches and shrub encroachment of the old network of paths are increasing. And otherwise in turns into a garden type landscape, inspired on the traditional olive grove mosaic, but not oriented for production and only weakly supported in a landscape integrated vision. Here the rural occupancy corresponds to another combination of consumption, protection and production, where mainly the first is the driver, in what may be called an *amenity* landscape (Holmes 2006).

In the case of the second houses, the work in the land has here been secured by the older small farmers, working as farm workers or through different kinds of agreements. Nowadays, with the progressive ageing of those older farmers, this represents a service to be soon extinct. Not only did these farmers provide their work, but also their knowledge on the land use systems and the potentialities and limitations of the area, in agricultural terms. Without them, the new owners will be much more lost when they try to recuperate an old irrigation system or an old grazing rotation. One possible scenario for the future is that the landscape that motivated urban outsiders to live and bring their investment and innovation capacity to the area, can be changed in such degree that it may contradict the initial character of the existent landscapes. The challenge for the future is to balance and enhance the existent functions, integrating innovation in the traditional landscape, towards a multifunctional and more sustainable landscape. As such, also here new schemes of management support, or agreements, need to be set in place, if the valued qualities of this landscape are to be maintained.

5.2 Dialogue and joint action

In Castelo de Vide, the analysis undertaken demonstrates clearly the differentiation of landscape areas, which have diverging characteristics, but also different management questions and are the object of different demands. It is clear that they should not be faced in the same way in the future. Nor in what concerns farming nor in what concerns the non-commodity functions. The distribution pattern of the preferences by users may support differentiated strategies for management, and thus also the correspondent types of farming. In areas as in Castelo de Vide, it would demand that farming assumes its new territorial role – there seems to be no other way out, for the farming sector. This transition may be supported in the conceptual discussion on new core modes of rural occupancy, by Holmes (2006), supported on the work by Barr (2005) and Marsden (2003) and others. This process of transition needs also to be based on dialogue and discussion on the alternative options, involving not only inhabitants and technical staff, but all types of stakeholders dealing with the area – like the users of the landscape which have been object of this preference study.

A session of presentation of the diagnosis, and of the related discussion, has been organized in Castelo de Vide, when all results were ready (Winter 2009). The session was visited mainly by technical staff, from different bodies. The local population, as well as neorurals, ecotourists, or hunters, were weakly represented. Though, from the discussion, some interesting points for further dialogue have emerged. The landscape preference study expresses differentiated values, synergies and conflicts, that open up to a process of collaboration that still has to be developed. The local development association and the municipality board have showed more than once their interest in progressing in that sense – but this phase is still to be developed.

5.3 Exchange and evaluation

This phase has not been started yet in Castelo de Vide, even if the awareness for the need to proceed in this sense is there, among decision makers and involved partners.

6 Concluding remarks

It is not new that new possibilities for rural areas, and particularly for the most peripheral areas, are supported in a new understanding of the role of farming and the acceptance that other functions may be leading in defining land use management (Durand and Van Huylenbroeck 2003; Wilson 2007). As described by Marsden (2003), in between the *agro-industrial dynamic*, based on productivist action and though, and the *post-productivist dynamic*, which sees the rural as a consumption space and where nature and the

landscape are commodified, there could be place, in rural landscapes which are today as multifunctional as in Castelo de Vide, for the building up of a *rural development dynamic*. This would demand an acceptance of a new role for agriculture, combined with the production role, and also an awareness and appropriation by the involved actors of some values of the rural space which are lost or are getting lost in the present situation, but can be renovated (Marsden 2003). Castelo de Vide seems to gather the potential that makes this transition possible. It is still to be seen who will lead the process and how central policies and institutions will support this transition.

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