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THE IMPACT OF PERCEIVED LAND-USE VALUES
ON BIODIVERSITY CONSERVATION
IN THE VIKOS- AOOS NATIONAL PARK,
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ABSTRACT

Peoples changing perceptions and cultural values may result in changed landscape structure. Especially in the Mediterranean where long-term human disturbance has frequently resulted in higher species changes in 'cultural landscapes' are a major risk for biodiversity.

This study measures perception of habitat values and uses among stakeholder groups in a mountainous village in northwest Greece. Agricultural abandonment and rural depopulation, mainly after the Second World War, and recently increase of tourism because of tourist development and the designation of the area as national park have had a big impact on perceived habitat values and the landscape.

Semi-structured interviews with the help of photographs, scoring for perceived value of habitats and perceived changes in natural environment proved very successful in establishing whether land use patterns and pressures can be predicted by the perceptions of habitat value and use among stakeholder groups.

What resulted was that perceived habitat value and use are strongly correlated. The most beautiful and important areas at present appear to be those where human pressures are bigger. Human pressures from the area around the village where landscape used to be the most modified by long lasting management practices are extending out to formerly isolated spots used now by tourists.

Young people and newcomers have a higher perceived value of the area and recognize 'ecological' values as the most important components of their environment. Utilitarian reasons mentioned by older people are decreasing

along with abandonment of traditional activities. The most valuable places in the past were related to farming and are now being replaced by those used intensively in present by the local tourist business. People recognize recovery of vegetation due to abandonment as the main type of change in the area.

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1. INTRODUCTION

The fundamental premise for examining human culture in ecology is that culture structures landscapes and these landscapes are the beginning of a series of consequences in biodiversity.

Landscapes are significantly influenced by culture and therefore changed perceptions and cultural values may result in changed landscapes. Especially in the Mediterranean basin "domesticated or cultural landscapes" are particularly vulnerable to changes in socio-economic processes.

Such dramatic changes in the last few years in Mikro Papigo and Megalo Papigo, a mountainous region at 1,100 m. altitude in north-west Greece made this area a convenient region for this study.

In the beginning of the 20th century this isolated community had a self-sufficient life style utilizing the full potential of its land for cultivation, grazing and every day needs. Socioeconomic changes lead to changes in this system and the total abandonment of agriculture after the Second World War. The designation of the area as national park and the restoration of the village as part of a tourist development programme was the latest cultural change in the area and resulted in enormous increases in tourists in the last 15 years followed by significant changes in traditional land uses.

The aim of this study was to investigate traditional and modern land uses and to test if changes in these practices are correlated with changes in values adopted by the local population. The areas that different people use preferentially over time, know best, and value highly were compared in order to find if changes have an effect on human pressure in different habitats and consequently on biodiversity.

LITERATURE REVIEW

Thus the hypothesis to be tested was if the impact of changes in land-use patterns can be predicted by the perceptions of habitat value and use among stakeholder groups.

Collection of data was based on a combination of qualitative and quantitative tools. Historical evidence and information, semi-structured interviews with the help of photographs, scoring for perceived value of habitats and perceived changes in natural environment were all used in order to find land use patterns, perceived values and pressures in a variety of habitats, recognized by Natura 2000, the network of special areas of conservation in EC according to the "Habitats Directive" (92/43/EEC).

2. LITERATURE REVIEW

Nowadays, there is a recognition that what was so far considered as pristine nature and untouched wilderness are in fact “domesticated or cultural landscapes”, a result of a long interaction of human populations and environment which has produced irreversible changes in biological as well as ecological diversity (Bennett, 1996; Farina, 1998). Even in the tropical regions many areas which were formerly considered as “natural” are the products of aboriginal and historical human presence (Posey, 1993). 12% of the Brazilian Amazon rainforests have signs of former human occupation (Balée, 1989), while similar observations have been made for Australia, Papua New Guinea and West Sumatra (Boerboom & Wiersum, 1983; Mabberley, 1992).

Especially in regions with Mediterranean climate the combination of a vulnerable environment and human occupation have made the impacts of human modification of the landscape very obvious (Naveh & Dan, 1973). The lowest population density in any Mediterranean climate zone in the world is found in Australia and despite this, it has been said that it represents the world’s most disturbed natural ecosystem (Aschmann, 1973).

In addition human pressures on the natural ecosystems of Mediterranean Basin, which was the cradle of some of the world’s most ancient civilizations, have

existed for so long that di Castri (1981) did not hesitate to argue that a complex co-evolution has shaped the interactions between the ecosystem and humans through long-lasting but constantly evolving land use practices (Di Castri, 1981, in Blondel & Aronson, 1999).

Thus, a cultural landscape could be defined as one which has been changed to some degree by long-term human disturbance by which a unique assemblage of patterns, species and processes has been created (Farina, 1998).

The modification of an ecosystem by human activities is a relatively slow and cumulative process. As cultural landscapes have extended over large parts of Europe and Mediterranean from at least the Holocene period, the area has been so profoundly transformed by human occupation that appreciation of 'landscape archaeology' is necessary in order to understand what we see in the present (Aschmann, 1973; Blondel & Aronson, 1999).

There are an infinite number of types of cultural landscape around the world and tremendous variation in the nature and intensity of the modification of natural ecosystems, but all are strictly structured according to local tradition, cultural practices and values that vary in detail among societies and from one historical period to the next as a result of changing demographic and socio-economic conditions (Aschmann, 1973; Farina, 1998; Blondel & Aronson, 1999).

Features such as, for example, the preferred grain for breadstuffs, the species of domestic animal herded, or whether agriculture is a commercial enterprise or a subsistence way of life have strongly affected the choice of land for cultivation or abandonment and the intensity of imposition of a cultural landscape in place of the natural one (Aschmann, 1973).

In particular livestock husbandry and breeding that have been of enormous importance to humans from at least the Neolithic revolution in the Mediterranean are among the most important forces shaping Mediterranean landscapes (Blondel & Aronson, 1999). Goats have been blamed as the main culprits of Mediterranean land ruin as almost everywhere is accessible to, and affected, by them (Kolars, 1966, in Aschmann, 1973; Naveh & Dan, 1973).

Although cultural landscapes are generally created by sedentary populations, there is no reason to exclude landscapes modified by nomadic populations (Farina, 1998). For example, the alpine zone in the mountains around the Mediterranean has been extended down into the tree zone as a result of transhumance.

Apart from livestock, other human activities and needs such as clearing of trees for agriculture, domestic firewood, furniture, charcoal and construction had their own impacts on the landscape especially in the vicinity of human habitation and villages.

An undeniable part of this process was forest destruction and replacement by simpler systems providing a more convivial 'space' for people. Native forests, never abundant or fast growing, came to be recognized as a resource that needed care and protection and in many cases traditional conservation systems, sometimes through religion, were a common practice in various societies (Martin, 1994; Berkes, 1999).

Prehistoric peoples in the Mediterranean are held largely responsible for the mass extinction of large mammals in the upper Pleistocene while in historical times the destruction of forests lead to extinction of forest animals, e.g. the fallow deer (*Cervus dama*) which persisted until 1850 in the forests of central Greece (Catsadorakis, 1999).