

## Payments for pastoral landscapes of Europe

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Agri-environmental payments are considered in this book as necessary payments to maintain pastoral (grassland dominated) landscapes in Europe as open landscapes, but in the recent literature (Kleijn et al. 2001) it is doubted whether these payments to farmers are effective in terms of biodiversity. It is argued below that payments should be provided on a level of integrated farm systems, which contribute to clean water, biodiversity as well as to low input agricultural production.

Patterns in plant diversity in Europe are strongly related to human land-use practices. Figure 1 gives an overview of the number of plant species in various Central-European landscapes with a different degree of human impact. Without human interference plant diversity in the present-day European landscapes would be strongly reduced. The highest plant diversity can be found in landscapes with low-intensity farming systems.

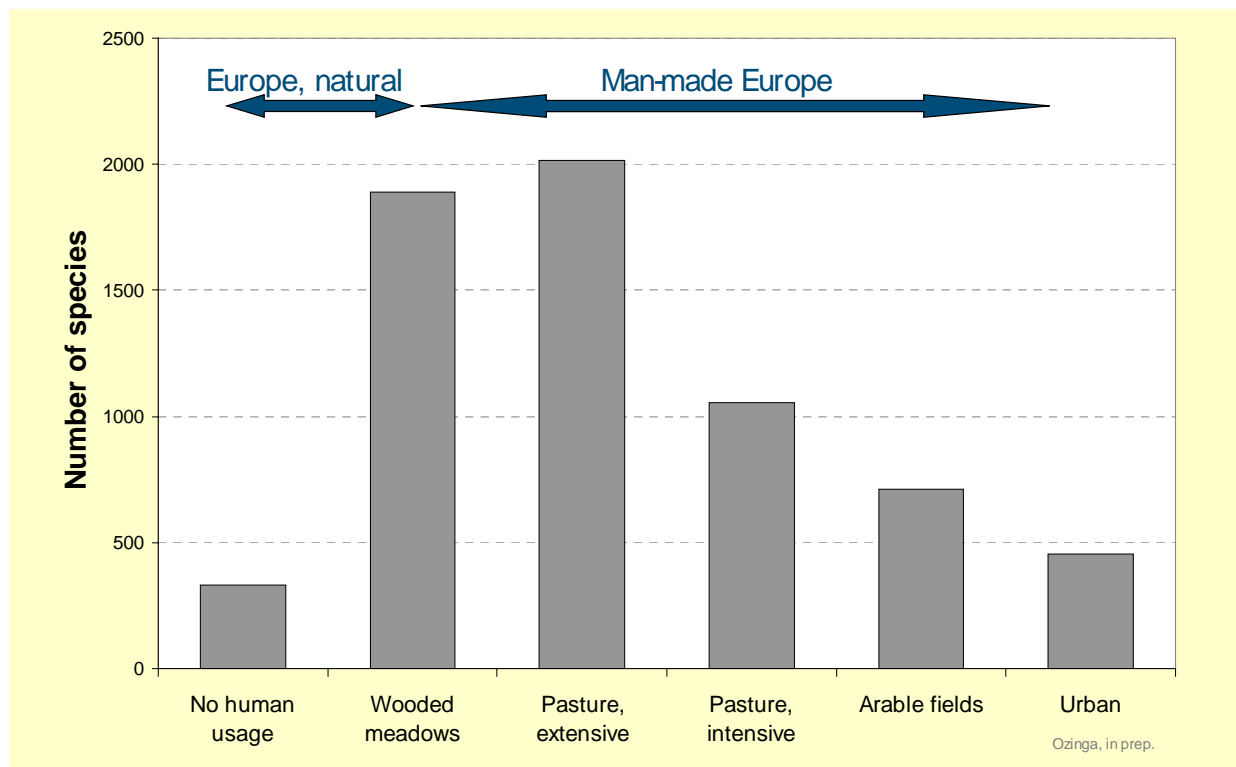


Figure 1: Plant diversity in Central Europe under different degrees of human intervention (Ozinga, unpublished).

Low-intensity farming systems partly replaced grazing by large herbivores. Vera (2000) therefore proposed 'naturalistic grazing' with free moving, large herbivores as a way to maintain species-rich wooded meadows. There is however considerable debate on the question whether naturalistic grazing in itself is able to maintain semi-open landscapes (Bokdam 2003). Most large 'megaherbivores' from pre-human landscapes have become extinct in Europe. So, in (nearby) pre-human landscapes climatic factors in combination with natural disturbances (e.g. episodic fires or floods in conjunction with browsing) may have been more important in generating openings in closed forests. Irrespective of this relevance of the above discussion, the approach of naturalistic grazing is only feasible in very large nature reserves, leaving large stretches of land open to other management alternatives.

Similarities between pastoral land-use systems and natural disturbances (including grazing) have probably contributed largely to the survival of many species from (semi)open habitats in pastoral landscapes. The key-message is therefore, that the long-term survival of many 'grassland species' in present-day landscapes without megaherbivores and without large scale natural disturbances, will critically depend on pastoral land-use. The further analysis of functional traits of plant species in relation to various land-use scenarios and farming systems will facilitate the maintenance and development of pastoral landscapes that combine socio-economical and ecological sustainability. Such research is needed to assess the possibilities to restore biodiversity in overdrained and fertilized land.

The use of agri-environmental payments is one of the EU environmental instruments under Pillar 2. In this book these payments are assessed for farmers in Poland in fen peat landscapes. The level of payments of 200-400 euro per hectare is considered realistic (see chapter 6). Similar payments in the Netherlands are about 1000 euro per ha reflecting higher living standards, but also a higher labour and capital input to manage the small scale Dutch landscapes. From a farm-income point of view, however, payments should not be provided on a hectare base, but should be related to a whole farming system. This approach is promoted by the "Farming for Nature" system in the Netherlands (Stortelder et al. 2001, Schrijver et al. 2006). As said Dutch landscapes are rather small scale systems and therefore payments (on a hectare base) in other countries may be lower, allowing to manage more land by one farm.

Another question is how much budget would be needed in order to keep pastoral landscapes in Europe open? Within this wider "open landscape" perspective 20 percent of the EU agricultural land equivalent to 0.37 million km<sup>2</sup> is under an agri-environment system, which partly overlaps with 56 percent of farm land in the so called Less Favoured Areas. In other words about half of the agricultural land is considered by the EU as potential marginal land. EU Payments under pillar 2. What about the available budget? There is a tendency to reallocate budget from pillar 1 to pillar 2. Over the period 2000-2006 the share of pillar 2 in the total agricultural budget was 10 percent. In

the period 2007-2013 this figure is almost doubled to 19 percent. The agricultural budget over the whole period in pillar one and two is 293 billion and 70 billion euro, respectively. The question is whether this budget is sufficient to keep landscapes open and if yes, whether the budget in pillar 2 is spent in agreement of the environmental goals? With respect to pillar 2 budget, at least 25 percent has to be allocated to improve nature and landscapes. On the other hand still 10 percent has to be spent for improving the competitiveness of agriculture and not contributing to the environmental goals set.

Assuming that fifty percent of the potential marginal land (0,9 million km<sup>2</sup>) has to be supported in the EU with an average of 400 euro (?) per hectare the total budget needed over the period 2007-2013 would be 288 billion euro. In other words to achieve this objective it would be wise to allocate 80 percent of the total budget to pillar 2. Whether this budget should be provided by the EU or by national member states is a topic for further discussion. A suggested shift in budget does not necessarily effect negatively the income position of farmers outside the LFA area. This is likely as less production will come of the potential marginal land.

### **References**

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