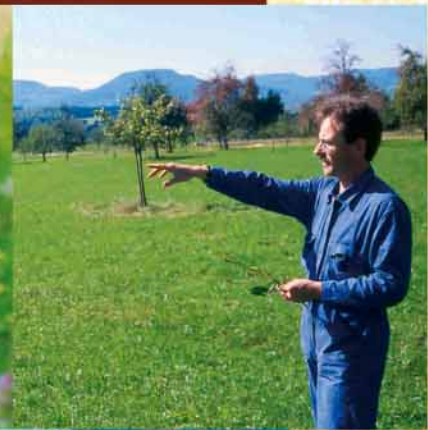


Agriculture for Nature and Men

Maintaining and
developing cultural
landscapes through
remuneration of
ecological services



Introduction an background

Agriculture has been and continues to be the element which most strongly shapes our cultural landscapes. Colourful flower-rich meadows, juniper heaths with fragrant thyme, or wet meadows from which the fluty trills of curlews arise – such valuable habitats have evolved as a result of agricultural land use.

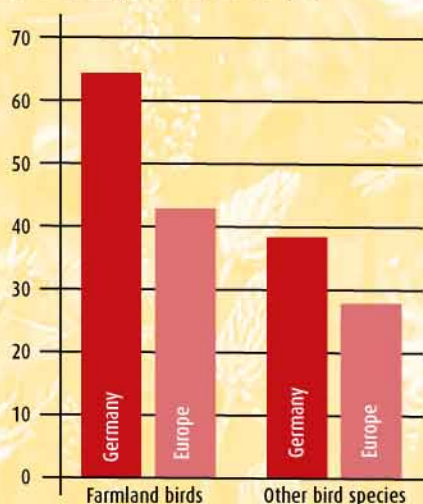


Modern farming has to stand its ground in a marketplace that is characterised by low food prices. Intensification and concentration on the more easily manageable lands in the favoured regions are the results. On many farms the management of those meadows, pastures, and species-rich arable lands, which are of particular ecological importance, is not profitable. Farmers who are conscious of cost-effectiveness are thus often left with only two alternatives: to intensify management or to abandon the land. However, both alternatives generally lead to a loss of species, habitats, landscape diversity and – ultimately – quality of life.

Contractual conservation management agreements and agri-environmental programmes have proved to be useful instruments for the protection of ecologically important sites in the cultural landscape. These are voluntary agreements which reward farmers for the services they provide in protecting flora and fauna, habitats, and cultural landscapes with payments sanctioned by society at large. A rich body of experience has been gained since these types of agreements were introduced in the early 1980s and 1990s. It has been shown that they can be quite effective in providing for ecological management of isolated patch habitats. However, in the wider landscape, species decline continues unabated and there are no signs of a reversal of this trend. With regard to bird species (Fig. 1) this has been particularly strikingly documented. For this reason the European Council in June 2001 formulated the objective of stopping biodiversity decline in the European Union by 2010. Moreover, Germany made a commitment at the World Summit on Sustainable Development in Johannesburg 2002 to “achieve a significant reduction” in the current rate of biodiversity loss by 2010. However, this will only be possible if agriculturalists and conservationists make a concerted effort.



Percentage of birds in the Red Lists of endangered species (%)

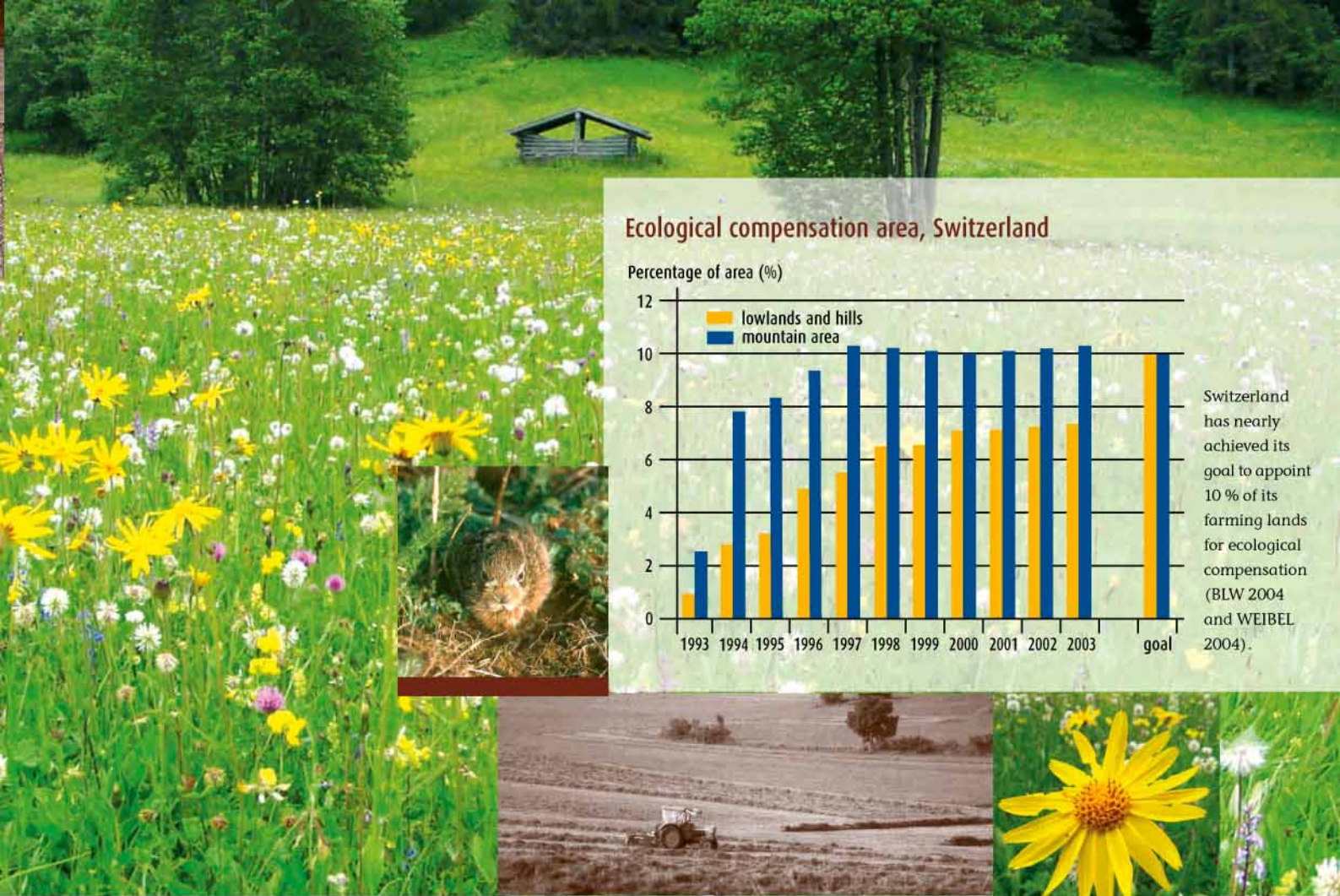


The loss of farmland species in Germany and all Europe is disproportional high to other bird species. This is also reflected in the Red List: the percentage of endangered species is higher in farmland birds (HÖTKER 2004). Farmland birds are indicators for the whole ecosystem of farming landscapes.

It was against this background that the German Association for Landcare (Deutscher Verband für Landschaftspflege DVL – umbrella organisation of regional landcare associations and biological stations) and the German Federation for Nature Conservation (Naturschutzbund Deutschland NABU – specifically the Institute for Landscape Ecology and Nature Conservation ILN, Singen) made a study to demonstrate how existing instruments (i.e. contractual conservation management agreements and agri-environmental programmes) could be developed to help maintain or possibly increase species diversity in the wider landscape¹⁾. As part of this work, experiences from Germany as well as other countries were collected and discussed in two international expert workshops. The main results, which give direction for future work, will be summarised below.

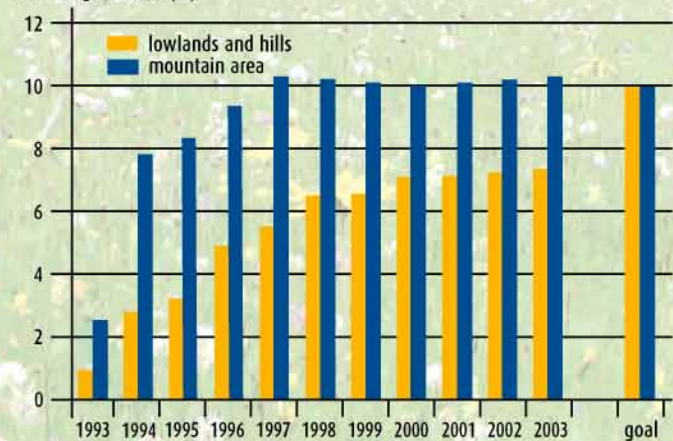
¹⁾ The research and development project entitled “Angebotsnaturschutz – Agrarumweltprogramme und Vertragsnaturschutz weiter entwickeln” (Conservation by tender – Further development of agri-environmental programmes and contractual conservation management agreements) was financially supported by the German Federal Agency for Nature Conservation (BfN) with funds provided by the Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU).





Ecological compensation area, Switzerland

Percentage of area (%)



Switzerland has nearly achieved its goal to appoint 10 % of its farming lands for ecological compensation (BLW 2004 and WEIBEL 2004).

1 State clear objectives!

An essential prerequisite for the effective design of agri-environmental programmes is the statement of clear objectives, both from the ecological and economic points of view. Clearly defined targets allow the assessment of the programmes' actual impacts, which in turn can increase acceptance, and they are an essential prerequisite for the efficient use of exchequer funding. Examples from both Germany and abroad have shown that this is not only a promising approach but it also eases the burden on everyone involved in agri-environmental work.

In Switzerland there are both quantitative and qualitative targets relating to ecological compensation areas. In order to receive direct payments from the government farmers must make 7% of their lands available for ecological management ("Ökologischer Leistungsnachweis" - "environmental performance record"). Additionally, remuneration is based on site quality and the quality of its habitat network integration with, for example, regionally defined indicator species and target species serving as indicators. Field studies have shown that in this manner a significant increase of animal species characteristic of agricultural landscapes has been achieved. A result-oriented approach has also been taken in the Netherlands, both in programme planning and evaluation.

In Germany there is a need for greater reliance on such modern steering instruments and mechanisms, and clearly the EU should also demand their use.

2 Let meadows flourish again!

The cooperation between farmers and conservationists in Germany has thus far focused on very extensively utilised isolated grassland patch habitats and there have been successes: limestone grasslands, meadows mown for animal bedding ("Streuwiesen"), wet meadows, heathlands and acidic nutrient-poor grasslands have been preserved in this way and populations of endangered species have at least been stabilised at regional levels and in some cases even expanded. But the maintenance of species-rich flower meadows such as used to be found all over the country, or of the traditional extensively managed orchards and mountain meadows is by no means assured. Quite the contrary is the case – intensification continues to degrade or destroy these habitats, and their typical species assemblages vanish with them.

The prime objective must be to safeguard the joint achievements of conservation and farming in the isolated patch habitats through the extension of the relevant contractual management agreements to the entire landscape and to transfer these accomplishments to the "normal" grassland areas. The further development of agri-environmental programmes through the integration of results-oriented components is a step in the right direction. The results of the experiences with such approaches from Baden-Württemberg and Switzerland have been very good and demonstrate that the agricultural sector has a great interest in being financially rewarded for the production of colourful flower meadows.

²⁾ These experiences have been comprehensively documented in Oppermann & Gujer (2003): Artenreiches Grünland bewerten und fördern - MEKA und ÖQV in der Praxis (Ulmer), 199 pp.



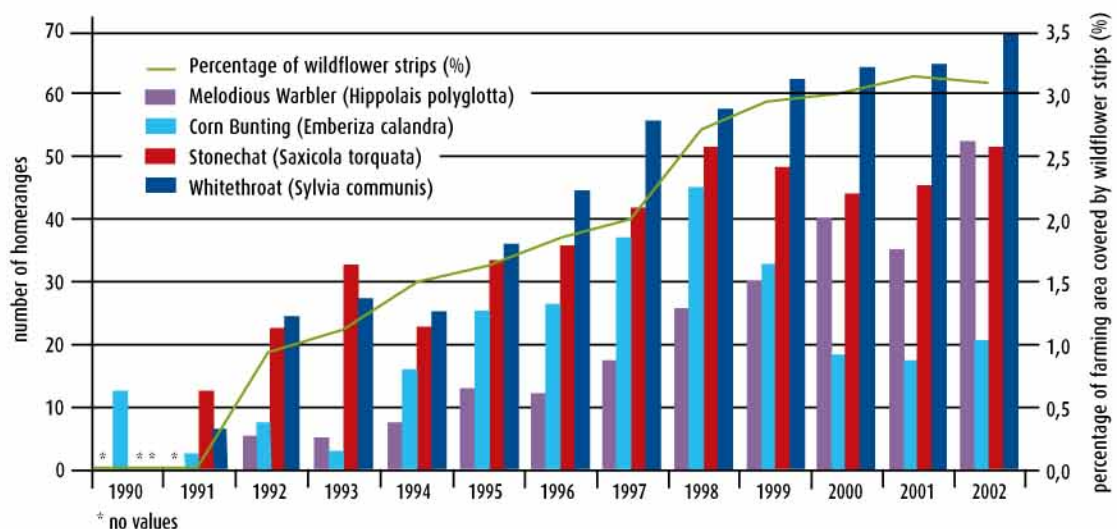
3 From landscape elements to tillage fields – revalue the „poor cousins“!

Despite the fact that landscape elements and tillage fields can be of major conservation value they have been given rather scant consideration in agri-environmental programmes so far. While programmes for the protection of arable weeds have successfully been developed and tested, it is only in the regional state of Lower Saxony that

they have been implemented to any extent. Similarly, the sowing of species-rich mixes of crop or wild species with the aim of establishing Buntbrachen (strips sown in wildflowers and herbs) or rotational fallows has only occasionally been carried out. The consequences of such omissions – dramatic reductions in arable weed



Population dynamics of some bird species



The population dynamics of some farmland bird species corresponds with the percentage of wildflower strips in the farming landscape. When the percentage of wildflower strips reaches a minimum of 5 % of the farming landscape, the populations of the farmland birds can be stabilized (JENNY et al. 2003).

species as well as in bird species typical of tillage lands – are clearly evident in Germany. Again, the Swiss experience demonstrates that a minimum proportion of 5 % of Buntbrachen (wildflower strips) established in keeping with conservation principles leads to a considerable increase in the numbers of skylarks and corn buntings. Therefore ecologically designed tillage and set-aside lands should be developed in all landscapes on selected sites (e.g. alongside watercourses, woodlands and tracks, or as subunits within larger land parcels). The opportunities for realising these objectives will



be greatly improved when the decoupling of agricultural payments from production comes into effect in 2005.

Efforts to establish and maintain landscape elements such as hedgerows, specimen trees, shallow depressions, and copses for the purposes of habitat networking should be supported and strengthened through appropriate support programmes. Giving adequate consideration to regional characteristics the establishment of landscape elements can bring new quality of life to “emptied” landscapes devoid of all natural structures.

4 Landcare through the farmer's eyes – a whole-farm-approach!

Thus far voluntary agreements between farmers and conservationists in Germany have generally been entered into for individual sites. However, farmers have to consider their entire holding. Therefore, conservation-oriented farm management plans should be supported through the agri-environmental programmes. This has the additional advantage that via this “whole-farm-approach” all lands can be assessed with a view to their ecological improvement while giving consideration to farm management issues as well. Other countries have developed exemplary models in this respect. These include the farm development plans in the Swiss Canton Aargau, the Austrian conservation plans, and also the whole farm approach and the Biodiversity Action Plans used in Great Britain. Such innovative concepts can be found on occasion in Germany, especially where large-scale grazing projects are concerned; they should be used more widely.

The key factor in achieving targeted ecological services is that farmers be given expert advice – again for the whole farm – by persons or institutions they approve of. Farmers and ecologists with a farming background should come together on-site to discuss the options for the farm. The required improvements and planning efforts should be remunerated, for example, by way of additional premia for priority conservation measures. Landcare associations (Landschaftspflegeverbände) and Biological Stations have proved valuable in providing conservation advice and aiding implementation, and so have some private consultancies, for example in Rhineland-Palatinate. At the local level, these agencies deal effectively with contractual matters, carry out site assessments and provide advice to farmers. Since service provision in the state administration in Germany is becoming ever more limited there is a great need for action in many of the regional states.

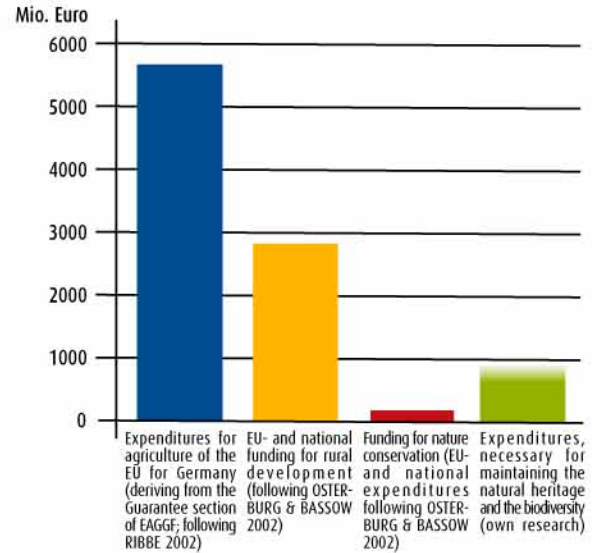




5 Provide fair remuneration to farmers!

The crucial element in developing stronger promotion of biodiversity and in encouraging farming in accordance with nature conservation aims is the appropriate remuneration of farmers. Estimates of the necessary financial requirements show that in Germany funds in the order of ≈ 628 to ≈ 961 million per annum are needed to remunerate farmers for the implementation of European and national conservation targets. Currently, the EU supports agriculture in Germany to the tune of $\approx 5,700$ million annually. In Germany the EU, the federal state and the regional states together provide $\approx 2,800$ million per year for rural development. These means are gathered under the name "second pillar of the agricultural policy". Of these funds approximately ≈ 760 million per annum are available for agri-environmental measures in Germany, but at present only ≈ 137 million of this money is used for measures with a conservation focus (OSTERBURG & BASSOW 2002). Most of the money is spent on measures which are of little value for species or habitat protection and which, in part, involve little more than the application of usual good farming practice. In this respect it is crucial that the agri-environmental programmes be rigorously

Annual public expenditures for agriculture in Germany



developed with a view to greater effectiveness and improved achievement of set objectives. Moreover, in order to protect European and German natural heritage there is an urgent need to re-allocate EU, federal exchequer and regional state funding towards programmes with a clear conservation focus. The required ≈ 628 to ≈ 961 million represent a mere 11 - 17 % of EU funding for agriculture in Germany. Thus, a financially enhanced second pillar in the new EU planning period of 2007 - 2013 is a core requirement for a fair remuneration of farmers efforts in nature conservation.





6 Win over farmers and the public for agri-environmental programmes!

There is a need for the creation of awareness among the general population for the specific (conservation) services provided by farmers to society. While the public at large generally holds species-rich cultural landscapes in high esteem, there is often a lack of knowledge and awareness of the interconnections between nature conservation and adapted land use. And there is nearly no knowledge about the necessity of agri-environmental programmes. Therefore, a great deal of educational and PR work is needed

in this regard. But there exist good examples how exemplary environmental services provided by farmers can be highlighted. These include the wild daffodil festival in the Eifel region, the shepherds' festivals in the Frankenjura, the Saxon mountain meadow competition, and the meadow championship in Vorarlberg (Austria). Individual laudable examples should be used to achieve a broader effect and to thus encourage a sense of responsibility amongst the people for the maintenance of the cultural landscape.

7 Develop and improve agri-environmental programmes in partnership!

The prospects for the efficient development and design of agri-environmental programmes increase significantly if the agricultural and environmental administrations work together with competent farming and conservation organisations in a constructive manner. The Austrian and Swiss experience in this regard shows that appropriately composed committees have improved the technical quality of the agri-environmental programmes, fostered the cooperation between farming and conservation interests, and heightened societal acceptance of the agri-environmental programmes. It thus also increased legitimacy for the allocation of funding. Therefore, in order to improve programme

development and evaluation it is proposed that such participative committee structures should also be established in Germany at the level of the Federal Government and at the level of the regional states. The partnership approach to cooperation must also continue between agriculture and nature conservation at the regional level. This can only happen if programme planning at the supra-regional level leaves sufficient room for regional modification.



The most important elements for increasing biodiversity in the farming landscape – Strategies for the regional states, the Federal Government and the EU – an outline:

- 1 State clear objectives: Quantitative and qualitative targets make agri-environmental work easier
- 2 Let meadows flourish again: Build on the successes achieved in isolated grassland patch habitats and transfer them to “normal” grassland areas
- 3 Revalue the “poor cousins”: Nature conservation on 5 % of tillage lands! Bring landscape elements into landscapes which have become devoid of natural landscape elements
- 4 Landcare through the farmer’s eyes – a whole-farm-approach
- 5 Provide fair remuneration to farmers: Re-allocation of agricultural funding
- 6 Win over farmers and the public for agri-environmental programmes
- 7 Develop and improve agri-environmental programmes in partnership



Further information is available from



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Imprint

Publishers:

Deutscher Verband für Landschaftspflege e.V. (DVL) and
Naturschutzbund Deutschland (NABU)

The project was financially supported by the German Federal Agency for Nature
Conservation (BfN) with funds provided by the Federal Ministry for the Environment,
Nature Conservation, and Nuclear Safety (BMU).

in January 2005

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with support of the above mentioned organisations and institutes.

Layout:

Schmidt & Schmidt, Fürth

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