

La Cañada



Newsletter of the European Forum on Nature Conservation and Pastoralism

No 5 June 1996

Bob Gibbons



The CAP and Environmental Practices – Brussels 29 January 1996

At the meeting in January 1995 (see *La Canada* No. 3) the European Agriculture Commissioner, Dr Franz Fischler, asked the Forum for specific examples of how agriculture policy interacts directly with farmers' decisions in areas which are still worked in an extensive, low-intensity way, and which retain high natural-value as well as viable rural communities. As a consequence of this request, a seminar based on the work of the Forum and its international network was held at the offices of COPA in Brussels in January 1996. The seminar, entitled *The CAP and Environmental Practices*, was funded principally by the British Ecological Society and organised through WWF's European Policy Office, and comprised four pairs of linked presentations followed by open discussions. This issue of *La Canada* is devoted to summaries of these. Six of the papers concentrated on particular farming systems. They explained their importance to wildlife, noted how the

systems are changing under current agricultural policies and highlighted the needs of farmers who were maintaining high natural-value systems. Two presentations looked at broader policy and rural development issues.

The discussions, chaired by Mike Pienkowski, Natacha Yellachich and Heather Corrie, explored the common factors linking features of different areas and systems to EC agriculture policy. The local requirements for sustaining nature conservation on farmland were discussed in the context of an evolving CAP.

Several Commission officials participated in the discussions and there was broad agreement about some useful general principles. Their very positive and encouraging contributions helped considerably in focusing attention on issues which could realistically be addressed in the forthcoming development of the CAP, especially in the livestock and olive-oil sectors.

Cattle grazing in the Grand Paradiso National Park, Italy. This region is the venue for the 5th Forum (see page 12).

Summary of conclusions of presentations and discussions

Some of the key conclusions from the broader discussions were:

- The considerable regional diversity of European farming systems requires policies flexible to regional needs and conditions.
- Several examples emphasised the biological need for continuity of management (e.g. many grazed habitats) and therefore reasonable continuity of policy.
- Different environmental problems, for instance under-grazing or over-grazing, can be created by the same policy operating in different areas and different farming systems.
- Measures under Regulation 2078, while essentially positive, are sometimes poorly designed, bureaucratic, inflexible and often not popular with farmers. Their compensatory payment structure can be inappropriate as a means of rewarding long-established management practices, especially in low productivity farmland. Regulation 2078 also relies on member states to provide

matching funding – some are reluctant to do this.

- From the nature conservation standpoint there is no neat distinction between livestock and arable farming – the priority in many parts of Europe is a continuation of appropriate types of mixed farming. This needs to be reflected at the policy level.
- The relationship between farming and nature is often complex, requiring a sophisticated understanding. It can be difficult to put into practical management recommendations for policy purposes. In high natural-value farmland the priority is often to find ways of maintaining the *status quo*.

Ways of taking ideas forward

Several possible solutions to these problems and ways of strengthening EC or national policies to benefit the environment were discussed, including:

- Exploring cross-compliance propositions for the CAP livestock and arable support policies.
- Attempting to match livestock numbers closely to the regional or local optimum carrying capacity of the land, perhaps initially in key areas. This would have to be achieved at the national or more local level.
- Redistributing more of the existing CAP support to high natural-value

farmland and exploring forms of graded support or modulation.

- Exploring possibilities for providing more assistance for labour (e.g. shepherding) rather than for production.
- Better integration of environmental and rural development policies could be achieved and could be beneficial.

There is often a coincidence of interest between nature conservation, cultural and social issues. The creation of traditional employment in the production of niche products using local resources and premium products from ‘natural’ farmland could benefit many areas.

The future

One aim of the seminar was a frank interchange of ideas and an open discussion of the realities of the process of policy reform. This was achieved but there are clearly still many problems to be overcome. There was a timely warning from the Commission – various initiatives have already been taken in the Common Market Organisations but the response from member states has been very limited and characteristic of their attitude to targeting and differentiation.

Unfortunately, the message from all presentations was that the direction of change was generally adverse for nature, reflecting the trend towards increasing marginalisation of less intensive farming

and more environmentally sensitive systems. There are also strong competing land uses, such as forestry and irrigation.

On a less pessimistic note, the opportunities for integration of environmental policy into a broader rural policy were discussed, together with the need to evaluate the limited experience to date and to build on successful regional and local examples. We need to know what has worked and what has failed. From the scientific and agricultural points of view, more research on the basic relationship between management and environmental impact would be valuable to allow better advice to be provided to policy makers. There is also a need to evaluate the effects on the ground in different areas of past and existing policies as well as the impacts in different member states.

Finally, we must maintain a vision for the future – a future for the CAP has been set out in the Fischler Strategy Paper, but the debate stimulated by this paper also needs to include a vision for high natural-value farming systems.

Forum participants were encouraged by the readiness of Commission officials to discuss key questions and there was a general feeling that many useful contacts were made which will be maintained and developed.

David Baldock, Eric Bignal & Mike Pienkowski

The olive-oil economy in the hill and mountain districts of Central Italy

Olive groves extend over approximately 1,000,000ha in Italy. From a nature conservation viewpoint the value of the cultivation system has declined in the last four decades, especially in the hill and mountain districts of Central Italy. A number of new intensive groves has been planted in flat or low hill areas where drip irrigation, fertilisers and pesticides are used to increase the production of olives. The olive groves may be grouped into four categories according to the level of management and to the productivity of the trees: intensive, extensive, marginal and abandoned.

For the conservation of biodiversity, the most valuable olive groves are the marginal ones, which shelter a number of insects, reptiles and passerine birds which are exclusive to this type of Mediterranean parkland.

The intensive and the extensive olive groves are regularly exploited by farmers,

but only in the intensive groves is the exploitation system sustainable under the current economic situation. Thus, extensive olive groves are only worth exploiting if the labour to harvest the olives is provided by the farmer himself.

Marginal olive groves are only harvested in high production years and then again by the farmer himself. The oil is used for family consumption, any surplus being sold to local customers. Abandoned olive groves are not exploited at all. With the current regime of subsidies, the oil producer obtains 1.0 ECU per kg of oil.

	Density of trees per ha	Productivity tonnes per ha	Grass Management
Intensive	>150	3-6	herbicides /plough
Extensive	100-150	1-3	plough/cut /sheep
Marginal	<100	<1 sheep	–
Abandoned	–	–	–

Besides the very low productivity of the marginal olive groves, where management costs can be sustained only if there is cheap labour available, there are other constraints on the development of the olive oil economy in the hill and mountain districts. Principally, these are the fragmentation of the properties, the average size of which barely exceeds a few hectares, and the very individualistic attitudes of the farmers which prevents any rationalisation of the production system.

In most cases, these marginal olive groves are cultivated only whilst the landowner, often elderly, is able to do this himself. After retirement, the cessation of cultivation and harvesting leads to invasion by scrub, the growth of bushes and wild trees and the gradual development of woodland.

It is beneficial in nature conservation terms to stop sustaining the abandoned and the very marginal olive groves since these are developing into woodland and maquis, creating a new habitat which is also important for wildlife. On the other hand, it is clear that the subsidies regime should be reviewed to stop the marginalisation and the abandonment of the less productive olive groves (the extensive

and the marginal groves which are still productive) and make these economically sustainable.

This result could be achieved if the olive premiums were related to the cultivated area (rather than simply to the weight of olives produced), and if additional help was provided for the restoration and maintenance of the old-aged olive groves.

The regime could also reward cultivation systems which preserve landscape features and do not use herbicides. The reformed policy for olive oil, like most of the support sectors, needs to be flexible enough to reward environmentally desirable systems, which are generally more expensive and less competitive than intensive mechanical ones.

Future perspectives

The most marginal olive groves are probably destined to turn into scrubland and woodland: many wildlife species will benefit from the change (for instance, porcupine *Hystrix cristata*, roe deer *Capreolus capreolus*, wild boar *Sus scrofa*, pine marten *Martes martes* and wolf *Canis lupus*) and it is important to sustain the natural evolution with forestry interventions and fire controls.

For the less marginal olive groves, one solution could be the setting up of co-operative groups of small land-owners. This would reduce the management and mill costs. Sales could be enhanced by the development of a local trade mark promoting their high quality oil. A good example of this is represented by the co-

Bob Gibbons



operative association of 'Terre del gallo Nero' in the Chianti area in Central Tuscany. Here, 126 small farmers joined together to produce an average of 160,000 kg of oil per year. Thanks to a successful promotion campaign they are able to sell the oil for 30,000 lira/kg (three times the price usually obtained by the individual farmers of Grosseto). Furthermore, they get additional income by agri-tourism in the area.

In these well-organised situations, it is

Olive groves in Tuscany. There are 5.39 million ha of olive groves in the EU. These support a wide range of migratory birds as well as breeding birds such as hoopoe *Upupa epops* and Scops owl *Otus scops* and roller *Coracias garrulus*.

also possible to implement the management techniques which increase the wildlife value of the olive groves.

Francesco Petretti, WWF Italy

Nature conservation and sheep farming on La Serena

Kevin Carlson/Nature Photographers



La Serena is a steppe area in Extremadura, in the south-west of Spain. The dominant farming system is sheep raising and most of the land is under permanent grassland, with a much smaller area under cereals and fallow. Overall stocking rates are about 0.3 LU (livestock units)/ha and average cereal yields are determined as 1.2 tonnes/ha under the CAP cereals regime. In European terms, the production system therefore appears to be very extensive.

The area is of great importance for the conservation of steppeland birds. In total,

Male little bustard displaying. In 1987 over 15% of the global population of this species occurred in La Serena.

some 35 breeding bird species occur, including several which appear in Annex 1 of the EC Birds Directive. The area is perhaps of greatest importance for the little bustard *Tetrax tetrax*. In 1987, the population in La Serena was estimated at 20,000 birds, representing possibly 15-20% of the species' world population. The area includes an Important Bird Area (IBA) of approximately 100,000ha. However, this has yet to be declared a Special Protection Area for birds, in accordance with the EC Birds Directive, and has no other form of designation, such as Natural Park, which would provide some environmental protection.

In recent years, a conflict has arisen between farming and nature conservation in the IBA zone. A combination of CAP sheep premiums and diversification into dairy production (for sheep's cheese) has encouraged farmers to increase their sheep-stocking densities. Sheep numbers in the main district of the IBA zone increased by 68% in the period 1982-1993. Statistics show that numbers are continu-

ing to increase as farmers in the area are buying up rights to sheep premiums. At the same time, stock have become increasingly sedentary, staying all the year round on fenced pastures. During the summer months, when plant growth ceases owing to the absence of rain, sheep used to be taken by shepherds to summer pastures in mountain regions (transhumance), or to graze on stubbles on nearby arable land (trasterminancia). Purchased feeds have replaced this and, as a result, sheep are present in large numbers during the steppeland birds' nesting season.

Severe overgrazing of pastures and trampling of nests during this critical period seem to be significant factors in causing the decline in steppeland birds which has been recorded in recent years. For example, data available for the periods winter 1986-87 and winter 1992-93 indicate that breeding bird species such as little bustard and stone-curlew *Burhinus oediacnemus* densities were down by 75%.

Zonal Programme

A Zonal Programme is about to be implemented by the regional government under Regulation 2078/92 for the area covered by the IBA. With the support of farmers and environmentalists, the regional government proposed a scheme whereby farmers would receive a payment in return for undertaking either local or long-distance (by train) transhumance. Although this scheme might have been successful in tackling the immediate problem of over-stocking in the late spring and summer, it was not approved by the authorities in Madrid and Brussels, as it would not have achieved an overall reduction in sheep numbers, as intended by Regulation 2078/92.

Instead, the Zonal Programme will offer a payment to farmers for each ewe taken out of production. In practice, this incentive is unlikely to be effective, as calculations show that the income foregone would be greater than the payment offered, even though this equals the max-

imum amount admissible under the national 2078/92 scheme. There are other serious obstacles to the success of the Programme, particularly the absence of effective support services in the region. Without active promotion, few farmers are expected to be interested in the scheme.

In the absence of other environmental or conservation measures, the recovery and conservation of bird populations in La Serena depends on decisions taken by farmers in the context of the CAP. Two critical elements of agricultural policy can be identified: firstly, sheep annual premiums play a key role in promoting and maintaining over-stocking; secondly, the effectiveness of Regulation 2078/92 is handicapped by its lack of local adaptability and by the lack of financial resources and support structures at the regional level.

Guy Beaufoy

The demise of cattle farming in the Black Forest

The Black Forest is situated in the far south-west of Germany in the Federal State of Baden-Württemberg. The mid-altitude mountain chain of the Black Forest extends over an area of approximately 4,500 square kilometres and reaches its highest altitudes (about 1,500m) in the south. On average, the population density is about 80 inhabitants per square kilometre which is fairly low compared to 280 inhabitants per square kilometre for Baden-Württemberg State. The Black Forest can be divided into northern, central and southern parts based mainly on historical, cultural and geographical as well as ecological differences. Although landscapes and farming systems have changed through time, we are now almost at the point where it will be decided if a region with a cultural tradition of more than 1,000 years and of European ecological importance will be extinguished within just one generation.

The following statements were made by Sicco Mansholt (former EEC Vice-President) in 1968: 'In the year 2000, agriculture in the Black Forest region will have disappeared. . . Because of disadvantageous conditions for agriculture there will be no further possibilities to compete with other EEC regions where food can be produced cheaper with lower input of labour, techniques and energy. . . It is envisaged that the Black Forest will

develop to an entirely wooded area.' Although this scenario from EEC bodies caused regional protests and led to the installation of the so-called Black Forest Programme, the region is still moving in the direction of this vision.

Disappearing pastures

The dramatic decline of agriculture over the last 20 years is obvious from data referring to the District of Freiburg. Here the number of part-time and full-time farms has fallen by more than half. At the same time, the number of dairy cows has fallen by 80,000. This has been accompanied by the disappearance of meadows and pastures followed by immediate reforestation. In many communities, the degree of wooded area has doubled in 40 years.

A frightening aspect is the poor level of agricultural training in the area. Because of the pessimistic situation, staying in the area and working in agriculture is not attractive to young people. In 1994, only 24 trainees were recorded in the area, although 250 trainees per year would be the minimum needed to secure the future of the 8,000 full-time farms (current status) in the region. Information and training is mainly given at the level of crash courses of 200 hours, simply to fulfil the farmers' prerequisites to be eligible for subsidies.

Market disadvantage

Among the many problems, one of the most crucial ones at the moment is that whilst a variety of programmes support extensive agricultural production, there are no ideas or mechanisms for marketing the resulting products. For example, there are special premiums paid to rear and keep the indigenous Black Forest cattle. However, in the normal market and under conditions of the EU meat classification system, this small and hardy breed, with extraordinary high-quality meat, achieves only minor prices. The ecological and physiological values of products and husbandry involved is not reflected in the market. Therefore farmers who try to farm in a traditional way are at a disadvantage.

Maintaining agriculture in the Black Forest is necessary for many reasons. Although food production in a region such as the Black Forest is labour intensive and therefore expensive, in contrast to many other regions, it is sustainable. Despite this, the Black Forest cannot cope with the global market schemes and prices which do not reflect the negative environmental impacts of more intensive agricultural systems.

What will have to change if extensive farming in the Black Forest is to be maintained? First of all, we have to accept that future farming systems will be different from today because of demographic and social change. Because the only products of economic interest are meat and milk we have to think of producing high-quality meat and dairy products. To achieve this money has to be spent on

well-targeted, long-term initiatives, and not (as happens now) on short-term solutions. What is needed urgently are concepts which integrate the interests of farming, nature conservation, landscape development, local crafts, tourism and forestry. At present, each discipline has its own suggestions and administrative structures and there is little co-operation.

Reiner Luick

A need for policy change

A promising model which could have a wider application is large-scale extensive pasture systems with cattle. But to make these work there has to be a change in EU agriculture policy. In contrast to the EU idea of further concentration of facilities, what is needed is more local, infra-structure with facilities, such as local slaughter- and cool-houses, which can help to guarantee for consumers the quality of the product and also the high standards of the processing methods. What also has to change is the unreliability of EU agricultural policy. Currently, Black Forest farmers have to deal with about 50 programmes for subsidies and premiums, often with annual changes. Such complexity cannot be handled any



more by individual farmers. Our policy bodies will have to be aware of the long-term needs of farmers to make regional low-intensity farming possible.

Rainer Luick

Black Forest cattle are a small, hardy, locally-adapted breed. They will need support measures if they are to survive in their native land.

Organic farming in Sweden

A structured approach is necessary for solving the severe environmental problems of modern agriculture. By addressing nutrient leakage, energy dependence, biodiversity degradation or soil depletion one by one, we will never develop long-term sustainable agricultural systems.

Most of the agricultural systems in Europe today are highly specialised. The mixed farms of the 1950s have been lost. Some regions are now dominated by dairy cows, while others have no animals producing manure to recycle through the system. This structural imbalance is more or less true all over Europe, including Sweden. To solve these problems, an agrisystems approach is needed. Organic farming is one example of a farming system with sustainability in focus.

The main principles of organic farming in Sweden are: 1) a balance between animals and plant production; 2) no chemical pesticides; 3) no fertilisers; 4) crop rotation; and 5) strong ethical rules for animal care.

The positive environmental impacts of

organic farming are substantial, with no residues of chemical pesticides in food, amounts of nitrogen used per hectare lower, and the leakage of nitrogen lower per hectare thanks to varied crop rotations, and long-term leys. Both the soil productivity, leakage of nutrients and the pathogen pressures benefit from the use of a long-term ley. Another positive aspect is that the leys provide habitats for birds, insects and other animals. A literature review recently carried out by the Swedish Society for Nature Conservation has shown that biological diversity is higher on an organic farm than on a conventional one.

Organic certification

Today, 3.5% of arable land in Sweden is organically cultivated with 2,500 farmers shifting to organic farming. Their products have a KRAV label. KRAV is a non-commercial, non-political certification organisation with members such as the Swedish Society for Nature Conservation, the farmers' union, consumer organisations and the major food chains. The establishment of KRAV ensures a flexible organisation allowing rapid adaptation to changes of the political and structural situation without losing the basic, simple rules of organic farming. At present there is a stronger demand from the consumer for organic products than can be met by the producers.

The financial returns for organic farmers have improved recently thanks to the Swedish version of Regulation 2078, which includes a substantial support package for organic farming. Before joining the Community, price support was the single instrument used to strengthen the gross margins for organic farmers. Organic products are, in general, 10-40% more expensive than conventional ones.

CAP and organic farming

To increase organic farming, major change to the CAP is needed. There is not space in this short summary to discuss some of the general obstacles, such as the total lack of environmental goals within the main body of the CAP. However, possible improvements might include: altering Regulation 2078 to specify what the farmer is not allowed to do, instead of describing in detail what he must do; allowing the use of sewage sludge; and allowing a conversion period of one year. Also direct area payments should include ley and organic farming which should be exempted from the set-aside requirements. These changes would be a starting point for making organic farming an attractive alternative for the farmer and ensuring good quality products for the consumer – something which is increasingly being recognised by politicians and farmers' representatives.

Gun Rudquist

Farming in the Portuguese montados

The Portuguese montados are a mixed wood pasture and arable system created over the centuries as a result of human intervention in opening up the original oak forest. Through climatic preference, the cork oak *Quercus suber* montados are found closer to the coast, the holm oak *Q. rotundifolia* montados in the drier interior, and the deciduous oaks *Q. pyrenaica* and *Q. faginea* to the north.

The traditional farming systems practised in the montados combine extensive cereal and forage cropping, with natural grassland and livestock production, contributing to the survival of several native breeds of cattle, sheep, goat and black pig. Historically, Portuguese cereal production has been highly subsidised, making it viable to grow crops even on poor soils with low yields. With the recent changes in the CAP, cereals for grain are no longer viable on poorer soils, as in the montados, but remain essential as a forage crop providing grain and straw for the winter, and stubble grazing in the summer. Oats are the usual crop grown in a long rotation.

Portugal's montados provide 70% of the world's cork, as well as firewood, charcoal and acorns. The diversity of flora

and fauna found in the montado habitat include some of Europe's rarest species, such as the wolf *Canis lupus*, Spanish lynx *Lynx pardina*, black vulture *Aegypius monachus*, imperial eagle *Aquila heliaca* and the European crane *Grus grus*.

Problems of over-grazing

Over the past ten years there has been a dramatic drop in the rural population and the workforce, leaving only the older, less educated people. Headage payment to livestock in the LFAs have made a very valuable contribution towards maintaining the remaining community, but it has also contributed to a problem of over-grazing, as higher stocking rates make higher profits. Between 1989 and 1994, sheep and goat numbers rose by over 30%. The mechanisation of farming and increased density of livestock have had a negative effect on the natural regeneration of the montados, leaving ageing stands of trees. Just as overgrazing is a problem, so is abandonment to scrub, where farming has ceased to be viable. Also trees are cleared for new irrigation schemes, such as the Alqueva Dam project in the south Alentejo and its proposed irrigation area. This alone will account for

the loss of over 50,000ha of montados, financed by the EC Cohesion Funds.

The largest part of the support to Portuguese agriculture goes to the arable sector on the best land, with high incentives to irrigate cereal crops. The farmers in the montados receive considerably less and have to intensify their stocking rate to produce a profit, as the 'ecological optimum' livestock density for the montados is not economically viable.

The 2078/92 agri-environmental regulation had a reasonable initial uptake in Portugal, but the lack of funds from the national budget is very seriously affecting its future. There is a lack of promotion and information or advice for farmers and this is seen as a policy to dissuade new applicants.

A delicate balance

The montados are a delicate balance between agricultural activity, pasture management and natural regeneration. Unfortunately, this balance produces a conflict of management priorities, since farmers are not able to be in different programmes at the same time (the 2078/92 agri-environmental, the 2080/92 afforestation, or the PDF forestry development plan, or FFOGA for cereals and livestock), forcing them to choose only one to the detriment of the overall equilibrium of the montado system. It is essential to revitalise and recuperate the whole montado balance because of its economic, social and ecological importance. This would require public support for gradual changes in the farming and grazing use, and allowance for natural regeneration (reforestation has been notably unsuccessful). New policies should be directed towards appropriate and sustainable grazing densities using mixed local breeds of livestock with the goal of maintaining the habitat mosaic of tree cover, natural pasture and scrub.

The existing CAP has failed to stop the drift from the land in the marginal farming areas of Portugal. It is essential to move towards a regionally integrated rural development policy combining agriculture and environmental support with strategic rural development. This will create more attractive conditions to bring young people back to the montados. The medium-term objective should be to achieve an active community within a viable farming and mixed employment situation that will survive into the future with minimal public support, maintaining a living landscape rich in wildlife.

Peter Eden

Dam in the Alentejo region. These EC-funded projects threaten large areas of the montados.

Kevin Cansons/Nature Photographers



Mixed livestock farming in the Highlands and Islands of Scotland

A theme common to Europe's low-intensity farming systems is that long-established farming practices produce a landscape which is ecologically and visually more diverse than intensively managed ones. This diversity has in turn provided conditions which are now crucial for the survival of many plants, animals and habitats of European significance. Some of the most critical conservation issues today relate to the abandonment of traditional agricultural practices. For instance, in the UK this affects hay meadows, lowland wet grasslands, heathlands, chalk and dry grasslands, blanket bogs and moorlands and even arable land. All these biotopes have been created and need to be maintained by farming at an appropriate level.

In the Highlands and Islands of Scotland, mixed livestock farms have created conditions of high ecological value by :

- 1 Maintaining varied types of pasture (in terms of both structure and plant composition) through the grazing of sheep, cattle and (locally) horses. These extensive pastures create conditions at a variety of scales for plants, invertebrates, birds and mammals.
- 2 Creating seasonal variation through cultivation of grass for hay and silage, cereals and root crops and the feeding of these to livestock on pastures during the winter months.

Until very recently many areas, including the croftlands, supported a unique wildlife assemblage including many rare species as well as 'common' ones which were typical of farmland in southern Britain 30 or 40 years ago (e.g. brown hare *Lepus europaeus*, wading birds, such as lapwing *Vanellus vanellus*, snipe *Gallinago gallinago* and redshank *Tringa totanus*, also birds associated with mowing grass, such as corncrake *Crex crex*, and birds of arable land, such as skylark *Alauda arvensis*, linnet *Carduelis cannabina*, reed bunting *Emberiza schoeniculus*, yellowhammer *E. citrinella*, finches, etc.). Some farmland like this still survives but it is declining fast.

Over recent years there has been an increasing trend away from mixed livestock rearing of sheep and cattle towards specialist intensive sheep production. Associated with this change is a decrease or abandonment of cultivation, a decline in hay making and an increase in intensive grassland management for silage production. These changes are eroding the nature conservation value of the area and reducing farmland biodiversity.

The main policy area this relates to is the livestock regime, particularly the sheep regime, because 2078 schemes (Environmentally Sensitive Area –ESA) are limited in area and in their effectiveness in addressing this issue. ESA payments cannot compete with the incen-

tives from the main CAP support sectors which do virtually nothing to support environmentally beneficial farming systems.

From the nature conservation standpoint there are two sequentially related issues: firstly, the abandonment of mixed livestock and arable farming in favour of sheep monoculture; secondly, sheep densities, which in many places are now in excess of the natural carrying capacity of the land.

An example

A real example may help to illustrate the economic pressures farmers are under. Kindrochaid is a 56-hectare farm in the Inner Hebrides made up of permanent grassland, arable land, heather moorland, marsh and bog. Part of the farm is designated as SSSI and SPA and it is within an ESA.

To maintain the nature conservation interest associated with the mix of habitats on it, the farm is stocked below the commercial stocking level, that is with 10 cows (Highland), and 120 sheep (Scottish Blackface). Calves and lambs are born outside in spring, reared by natural suckling and sold in the autumn for either breeding stock (females) or fattening (males).

In EC livestock unit terms* (LU):-

10 cows 10 LUs

120 sheep 18 LUs

Total 28 LUs

Stock density 0.5 LU/ha

*EC LUs: 1 ewe = 0.15 LU,

1 beef cow = 1.0 LU

The forage area includes 6ha of mowing grass (hay) and rotational arable (arable silage, cut oats and roots) for winter fodder. There are no arable area payments

Harvesting oats at Kindrochaid. Recognition is needed that biologically sustainable practices are generally labour intensive and therefore not economically viable in a purely production driven system.

Eric Bignal



available for growing cereals.

Farming with this number of livestock units, the comparative economics (including subsidies) of the three options – cattle only, sheep only or with both sheep and cattle – produces the following gross margins:

1 Cattle only	28 x gross margin of £250/cow	
		£7000.00
2 Cattle and sheep	10 x gross margin of £250/cow	
		£2500.00
	120 x gross margin of £60/ewe	
		£7200.00
		£9700.00
3 Sheep only	187 x gross margin of £60/ewe	
		£11220.00

If the far higher fixed costs are added to the cattle enterprises these differences become considerably more exaggerated.

In addition, the sheep-only enterprise has less risk associated with it through deaths, parturition difficulties and also replacement costs. But there is another rather more important point. None of the gross margins provide a sufficient income to support a family. A gross margin is not a profit figure. No account is taken of 'fixed' or 'overhead' costs (rent, labour, machinery, property upkeep and finance charges). So farming at this stocking density would have to be 'crofting' or part-time, another factor favouring an all-sheep enterprise.

Entering into an ESA plan could potentially produce a maximum payment of £5,840.00 which would involve additional expenditure and could require a reduction in stock numbers. A maximum annual payment of £6,000 per farm under the ESA would not make 'ESA farming' more attractive than 'commercial' farming. Ironically, from the economic viewpoint it would be best to farm with sheep only and have an ESA plan – intensify, specialise and also receive ESA payments.

In Wales and parts of northern England average stock densities reach 7 ewes per hectare (or 1.05 LUs/ha). So, for this farm to be viable (ignoring conservation needs), it would have to be stocked at around this density; that is carrying around 400 sheep to give a gross margin of £24,000.00. This would still be below the EC extensification threshold of 1.4 LU/ha.

Identifying some problems and possible solutions

1 Regional problems will not be solved by a single policy adjustment. *There needs to be some new zonation or ring-fencing to make policy adjustments for the environmentally sensitive regions. The LFA Directive should be reviewed to incorporate*

an environmental assessment. It is hard to target nature conservation with a relatively crude agricultural policy but more zonation would be helpful.

2 ESA payments are compensation payments to reflect loss of agricultural production. Low intensity systems are disadvantaged by this and *ESA payments do not provide an economic incentive to help sustain them.*

At present one payment erodes the system while another attempts to preserve its features in isolation.

Payments should reward farmers for the quality of the environmental products they maintain not compensate them for not farming more intensively.

3 The 1.4 LU/ha level set for extensification payments is too high for high natural-value areas. In addition, there is no extensification payment for sheep producers to stock below 1.4LU/ha. The latter could encourage a conversion from cattle to sheep in the more intensively stocked areas. *There could be two (or more) rates of premium depending on density and forage quality.*

4 Nature conservationists need to be clear what it is they want, so that rather than trying to adapt production support policies to create environmental benefits we should begin to *develop policies to produce specific environmental targets through agriculture. These need to be broad and directed at the farming system.* ESA prescriptions are generally too narrow, inflexible and focus on features rather than activities. As such they are not sustainable beyond the life of the schemes.

5 LUs could be based on feed consumption or energy requirements. This would differentiate in favour of smaller regional breeds of livestock.

a In the assessments of LU/ha *no account is taken of the composition of the different animals.* In nature conservation terms these grazing differences have significant effects.

b *Support payments take no account of the quality or the character of the animals.* For instance, the same headage is paid for large commercial cattle as for local and regionally adapted breeds.

c *No account is taken of the biological quality of the forage hectares (or the optimum carrying capacity of the land).* For instance, natural pastures are not differentiated from more intensively managed grasslands.

d *There is a need to define appropriate stocking densities, linked to the quality of the forage area, to favour more extensive production systems.*

6 Labour-intensive practices are being abandoned. *Incentives are needed to support labour units.*

7 High capital costs of machinery prohibit small farmers and crofters using mechanised methods, leading to abandonment of practices. Support for machinery groups could encourage this, *which could, in turn, encourage a return to more mixed farming practices.*

8 A number of measures might help to support the most extensive and low-intensity mixed livestock-rearing systems in the Highlands and Islands.

a Higher support for having LUs composed of *both* sheep and cattle, rather than specialising in just one.

b In defined areas, higher support for pure bred or first-cross regional breeds. There could be a variable premium for castrates from certain terminal sires.

c Support for extensive systems which do not house livestock in winter.

d Support for labour units for shepherding and winter feeding.

e A rotational cropping grant to encourage a proportion of cropping on all farms.

f Management *practices* of environmental benefit should be supported (in zones) rather than for *features*.

g Arable Area Payments could be made more flexible to encourage a return to rotational cropping for fodder production in certain areas.

Conclusions

Politicians say they are keen to see future agricultural support maintain a countryside rich in wildlife. If they are genuinely concerned about the environment and want to ensure that the CAP evolves to support farming systems which produce or maintain farmland of high natural-value, they have to be receptive to the kinds of issues raised in this example. In particular, clear objectives are needed and a better targeted support system with the environment as a primary objective. There needs to be harmonisation between incentives from 2078 schemes and the main CAP support (SAP, BSPS, SCPS, AAPS, etc.) and the environmental and social importance of farming systems needs to be recognised.

ESA payments should reward farmers for the environmental benefits they produce, not for the agricultural production that they have forgone. Unless this happens most high natural-value farmland will not survive.

Addressing these points might reveal areas of common ground between objectives for nature conservation, production quantity control, the public perception of farming practices (animal welfare) and also maintaining rural community populations.

Eric Bignal

Sustainable rural development

Reiner Lunick



True sustainability is not just about environmental issues or financial viability, but is also concerned with the long-term future of the rural communities themselves. Four key elements which work to prevent sustainability can be identified: the lack of access to the means of production; alienation from indigenous cultural identity; depletion of non-renewable commodities; and the under-utilisation of local assets and resources.

We have passed the period in history when we can look to agricultural policy alone to secure the diversity of aspirations held by rural and urban societies. These aspirations for rural areas include a measure of population retention, employment opportunities, social vitality, quality of life, adequate housing, environmental protection, recreation and scenic landscapes, as well as agricultural production. This is a complex picture which is much too subtle for broad policy statements which do not include a strong element of regional flexibility designed to endorse not only environmentally-friendly agricultural production, but also the social and cultural vitality of the rural communities which maintain this diversity.

When we measure 'efficiency' only in terms of the monetary return, without considering the socio-economic and environmental effects of these actions, we are looking at only a part of the issue, a part which is changed in its context and value as a result of being viewed in isolation from the other integral components. This has important ramifications for the manner in which we attempt to stimulate and secure rural development activities.

There needs to be an explicit recognition that even small amounts of public investment, targeted appropriately, may have a significant *multiplier effect* out of all proportion to the sum invested. Rural disadvantage and a limiting range of commercial opportunities mean that a small amount of financial assistance can be a major factor in enabling families to remain in rural areas. Securing official recognition of *integrated strategies* for land management which embrace economic, social and environmental mechanisms for supporting rural communities would ensure a lessening of the influence of purely agricultural strategies on countryside planning. It would also enable environmental conservation and social provision (e.g. health, education, services)

to play larger roles in rural employment creation.

Schemes which offer *graded assistance* to ensure the maintenance of healthy livestock numbers, grazing regimes, and traditional cropping patterns can be introduced to ensure maximum benefit to small-scale land-users and those who follow environmentally beneficial husbandry practices. The importance of the wide range of activities carried out by individual farms in retaining a rural population with a diverse economic structure needs to be rewarded.

Holistic approach

An *holistic approach* to the concept of sustainable communities must be reflected in practical support across the broad spectrum of economic, social, cultural and environmental development activities. It is important to seek a level of balance in these factors which reflects not only local needs and aspirations, but also ensures that measures to achieve 'sustainability' in one sector do not prejudice the sustainability of others, and therefore of the community as a whole. An approach by development agencies, non-statutory bodies, and local community representatives which recognises this may not be easy, but will be more likely to succeed. In this respect, involvement by the community is crucial. It is important that all involved approach the preparation of initiatives with an open mind.

There needs to be a focus of attention upon the management of land for the purposes of *ensuring biodiversity* as well as agricultural production. There are several initiatives, including the introduction of *cross-compliance* with agri-environmental measures, which could encourage habitat protection, while still contributing to economic activities. These could include the ESA schemes through which land users are rewarded for the continued use of *extensive systems* of production.

A rural landscape in the Black Forest.

Environmental and social audit

We should initiate a compulsory *environmental and social audit* on all land. This would form the basis of future management plans. Under these schemes, land users who have maintained a high quality natural environment through their management activities would be correspondingly rewarded according to the value of the habitat or commodities concerned. Land managers would be encouraged to work towards the improvement of their region from a measured baseline (and would be correspondingly penalised for deterioration of the locality resulting from inappropriate management activities). A move towards obtaining *financial returns from 'environmental commerce'* would include eco-tourism, and environmental interpretation, and this in itself would be a powerful incentive to include environmental considerations in business planning.

There is a need to ensure the utilisation of local land and natural resources in a manner which is of *optimal benefit* for the local community, and for the quality of the natural environment. The *cultural distinctiveness* of many of these areas lies in the physical appearance of the land, and this is a result of the activity of the indigenous population. The foundation of a sustainable tourism industry is based upon the continued presence of these distinctive and *valued landscapes* and the communities which maintain them, which in turn may be reflected in the (inter)national psyche, and could therefore be a major contributor to inward investment, economic diversification and stability of the region. For these reasons, the cultural landscape is a factor of major economic importance, even if it is difficult to empirically measure its contribution.

Frank W Rennie

Swedish Agri-environment Regulation 2078/92 Programme

Sweden's package of measures under agri-environment Regulation 2078/92 has been approved by the EC. It consists of three parts: measures to conserve biodiversity and the cultural heritage; a programme for environmentally sensitive areas; and organic farming incentives.

There are some particularly interesting aspects of the Swedish approach to the conservation of biodiversity and the cultural heritage. These include the categorisation of mowed meadows into two classes, A and B, according to their compliance with biological and cultural

value criteria. Meadows categorised as Class A are considered to be of particularly high value and must: exhibit plant species and communities which indicate long-term traditional mowing management; be affected by fertiliser or lime in less than a quarter of their area; and be completely unaffected by ditching, soil and gravel pits and seeds from ley species not connected to traditional mowing management. Higher compensation payments are available to Class A than to Class B meadows. Similarly, semi-natural grazing lands are categorised into four



Bob Gibbons

classes which form the basis for differentiated incentive payments.

Landscape elements

Also of interest is the Swedish approach to valuing landscape elements in arable areas. To be eligible for compensation under certain biodiversity and cultural landscape options, arable land must comply with a number of conditions (which differ slightly between the three zones to which the measure applies). One such condition is that the land achieves a certain number of 'qualification points' which are derived from the presence of particular features, including ancient monument sites, earth, ditched or stone walls, planted wind breaks, pollarded trees, hedges, natural streams etc. The occurrence of such elements is converted into 'qualification points', which take account of the manpower and material costs involved in their management.

The 24 County Administrative Boards will administer the measures. Prior to EU accession, Sweden's annual spending on agri-environmental measures was approximately ECU 30 million. Under agri-environment Regulation 2078/92, this amount has been significantly increased and is likely to be expanded even further. The budget for 1995 was over ECU 130 million.

Karen Mitchell

Hay drying on traditional racks in north Sweden. A wide range of measures have been approved to help traditional farms.

Application of Agri-environment Regulation 2078/92

Regulation 746/96 laying down detailed rules for the application of agri-environment Regulation 2078/92 has now been published in the *Official Journal* of the EC.

Several of the provisions of the Regulation serve to clarify the interpretation of certain Articles in Regulation 2078/92 e.g. the definition of 'abandoned farmland' and 'abandoned woodland', or concern procedural matters such as the verification of applicants' compliance with scheme conditions and the fixing of penalties for non-compliance.

Other, more interesting provisions include:

□ Paragraph 8 of the preamble to the Regulation states that 'undertakings to be given by farmers should normally go beyond the mere implementation of good farming practice' subject to certain exceptions. However, this

condition does not appear to be stipulated in any of the subsequent Articles and is therefore unenforceable, assuming that 'good farming practice' could be readily defined.

- Article 3 imposes a stocking density per hectare of arable land converted to extensive pasture of no more than 1.4 LU per hectare per year.
- Article 4 lays down a number of conditions for livestock extensification measures including a maximum stocking density limit to be achieved of no more than 2 LU/ha of forage area.
- Article 9 places a limit on the incentive component of aid payments of no more than 20% of the loss of income and costs incurred by the farmer, except where a higher incentive is needed in order to ensure effective implementation of a 'specific undertaking'.

□ Article 16 requires Member States to monitor and evaluate the incentive measures, including socioeconomic, agricultural and environmental aspects and to inform the Commission of their plans and procedures for such studies as well as the results. In IEEP Briefing Note *Agri-environment Regulation 2078/92 Implementation* of 19 April 1996 we reported our understanding that the new Regulation referred to consultation with national 'environmental authorities' in this regard. However, this is not the case. No mention is made of 'environmental authorities' in the adopted version.

□ Article 23 requires Member States to comply with most of the provisions of the Regulation from January 1997. Member States which need to alter their programmes in the light of the Regulation must submit the changes to the Commission by the end of September this year.

Karen Mitchell

Agriculture and environment in Central and Eastern Europe

In September 1995, BirdLife International in partnership with WWF and IUCN organised a timely meeting in the Hungarian Agricultural University at Godollo on agriculture and the environment in Central and Eastern Europe. The meeting brought together NGOs, governmental representatives and independent experts, including some Forum members to pool ideas for the formation of an Action Plan on agriculture and environment in Central and Eastern Europe.

The European Commission (DG VI) had recently produced its own report on the agricultural situation and the prospects for these countries, preparatory to the development of EC policy on integrating up to ten CEECs into the CAP. The DG VI report gave relatively little consideration to the environment, and the conference provided an opportunity to feed information and proposals back to the Commission during an important phase in the development of their thinking.

The Action Plan was designed to influence the *Environment for Europe* conference held in Sofia in October 1995 as well as the development of a strategy paper that the Commission was preparing on the CAP and enlargement (of the EU) for discussion at the Madrid Summit of Heads of Government in December 1995 – the so-called Fischler Strategy Paper.

Many of the environmental problems associated with agriculture in Central Europe bear a resemblance to those familiar in Western European countries. But there are additional problems, including the rapid decline in livestock numbers and abandonment of grazing in certain areas of high natural-value, the difficulty of maintaining viable forms of agriculture without adequate credit, the multiple challenges of land privatisation and restructuring, and the lack of government resources for providing farmers with incentives for good environmental management.

Recommendations

The Action Plan was drafted immediately after the conference and distributed among governments, NGOs and, especially, the Commission officials preparing the Fischler Strategy Paper. It urged decision makers, when considering accession strategies for the CAP to bear in mind the following three main recommendations:

- to assess the environmental and nature conservation impacts of strategies;
- to develop agri-environmental objectives for all assistance for restructuring, modernisation and diversification of the agricultural sectors of CEECs;
- to ensure that improvements to rural infrastructure have no detrimental effect on nature conservation, biodiversity and the environment at large.

Some of these ideas were subsequently developed in the Commission strategy paper and it is hoped that in future meetings of this kind, practical demonstration projects can be developed to put into practice the objectives of the Action Plan.

Copies of the Action Plan are available from Jim Dixon at the RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL, or Natacha Yellachich at WWF's European Policy Office, 608 Chaussee de Waterloo, 1060 Brussels.

Announcements and Noticeboard

This section was first introduced in *La Cañada* No 3 but owing to pressure of space did not appear in No 4. Several people have since commented that it would provide a good way of reaching the Forum's network with topical information and news, requests for help or information, reports of events which have taken place or are planned, as well as publications and reports relevant to the Forum's activities.

The editor would like to develop this section more and welcomes *short* contributions of this type at any time.

Seminar on Nature Conservation and Agriculture in Central Europe

This seminar, which was held in Debe, Poland, from the 11 to 14 May, was organised to develop the 'memorandum of understanding' on nature conservation between Poland, Hungary and the Netherlands.

Funded by the Dutch Ministry of Agriculture, Nature Management and Fisheries and the Forum, the seminar considered a number of topics: nature and farming in Europe; prospects and policies for integrating nature conservation and agriculture; policies for and practical ways of developing Eastern European agriculture (within the EU) in an environmentally sensitive and

sustainable way.

The Seminar was organised by IEEP London and proceedings will be available later in the year and will also be summarised in *La Cañada* No 6.

Olive paper

In March, Eric Bignal and Guy Beaufoy represented the Forum in Brussels at an informal meeting with Frank Leguen de Lacroix (DG VI) to discuss the impending reforms to the olive-oil regime. This meeting was a result of the Forum's seminar in Brussels in January (see this issue). Following the meeting the Forum agreed to produce a briefing paper for the Commission on potential reform to the olive-oil regime and nature conservation. The paper, *Environmental considerations for the reform of the olive-oil regime*, is available from Eric Bignal (address on back cover) price £5.00 plus postage.

WWF and Article 39

The objectives of the CAP are set in Article 39 of the Treaty on European Union. Formulated in 1957 they no longer reflect the problems faced by agriculture. WWF have produced a leaflet, *New Objectives for the Common Agricultural Policy of the European Union*. The leaflet, in German, French and English, suggests fundamentally new wording of Article 39. Copies are available from WWF European Policy Office, Chaussee de Waterloo 608, B-1060 Brussels & WWF-UK, Panda House, Weyside Park, Godalming, Surrey GU7 1XR UK.

La Cañada mailing and the data protection act

It is the policy of the European Forum on Nature Conservation and Pastoralism to distribute its newsletter and other information within the subject area, as widely as possible. To this end a computerised mailing list is held containing name and address details and, where known, telephone, fax, telex and e-mail details. As a recipient of *La Cañada* your address details are as on the label used to send you this copy of *La Cañada*. If your details are not correct, or if you no longer wish that your name is held on the mailing list, please inform the editor.

The Nature of Farming – poster

The Nature of Farming poster/leaflet has been available for some time in English and Spanish versions. Now this popular publication is available in both Greek and French. Copies can be obtained from Catherina Rastopolous, WWF Greece, 26 Filellinon Street, GR - 105, 58 Athens Greece and Societe Nationale de Protection de la Nature, 57 rue Guvier, BP 405, 75221 Paris, Cedex 05, France.

Heathland Workshops

The European Heathland Workshops are held every three years in one of the noted European heathland regions. The 5th Workshop was held in September 1995 at Santiago de Compostela in Galicia, Spain at

the invitation of the University of Santiago de Compostela as part of the celebrations for its Fifth Centenary. It was attended by about 65 delegates from nine countries.

The heaths in this region are rich in species of *Erica*, *Cistus* and *Halimium*. Formerly, much of this land was managed in a traditional cyclical manner in which the heathland was ploughed to grow crops, used for grazing then allowed to regenerate as heathland until the cycle was repeated. Most of these traditionally-managed heathlands are now abandoned and as a result are now mainly scrub of gorse, pine and eucalyptus. The last-named was introduced for commercial reasons 30 years ago and is now highly invasive. The tall scrub vegetation is very fire-prone, despite the highly oceanic climate of Galicia (>1800mm annual rainfall).

The next European Heathland Workshop will be held in Bergen, Norway, in 1998.

The network of delegates is being placed on a more formal footing, to provide it with an identity and maintain a register with nominated representatives from each country.

Anyone interested in the European Heathland Workshops and its network can obtain further information from Dr N R Webb, Furzebrook Research Station, Institute of Terrestrial Ecology, Dorset, BH20 5AS, UK. (Telephone +44 1 929 551 518; Fax +44 1 929 551 087; e-mail N.Webb@ite.ac.uk).

The 5th Forum on Nature Conservation and Pastoralism

After considering several options and possible venues for our biennial meeting, the Executive Committee can confirm that the 5th Forum will be held in Cogne, Valle d'Aosta, Italy, between Wednesday 18 September and Saturday 21 September 1996 at the invitation of the Assessorato dell'Agricoltura, Forestazione e Risorse Naturali, Regione Autonoma della Valle d'Aosta. The theme for the conference, *Nature conservation and extensive agriculture in Europe – integrating mountain livestock farming into European Union development*, reflects both the topical nature of the contributions that extensive livestock rearing can make (environmental, animal welfare and product quality and safety) as well as the venue in the Italian Alps. The 5th Forum could not come at a more appropriate time to influence the EU's development of new livestock policy options.

This year the conference has been arranged with the field visit at the beginning. There are two reasons for this. It will concentrate the indoor sessions to just two and a half days, allowing those with limited time available to attend all of these sessions. At the same time it will provide those delegates who can attend

the very start of the meeting the opportunity to meet in the relatively informal atmosphere of the Italian Alps. Those who attended the Trujillo field visit might recall that some of the most interesting and valuable discussions took place (in failing light at sunset) in the oak groves of the dehesa. One of the recommendations in Trujillo was that more farmers should attend the Fora and we are hoping to achieve this with both local farmers and others from further afield.

Main conference structure and themes

The structure of the 5th Forum and the main conference themes are as follows.

Arrival and registration at the Hotel Miramonte, Cogne will be possible from Tuesday 17 September. The theme for Wednesday 18 September is *An introduction to Cogne and the Alpeggio*. Following short presentations from Francesco Petretti, Claudio Bredy and from the Assessorato dell'Agricoltura, Forestazione e Risorse Naturali, there will be a field excursion into the surrounding areas to see the Alpeggio transhumant livestock system and the production of Fontina cheese and other regional products. We will examine in the field the nature conservation value of local mountain agriculture as well as off-farm activities, and discuss how this particular mountain livestock system can be maintained and developed together with the rural policies needed to sustain it. During the course of the day there will be plenty of opportunity for informal discussions between delegates.

The conventional sessions start on Thursday 19 September and will be opened by the Assessore followed by an introductory paper from Mike Pienkowski, the Forum's Chairman. There are two themes for the day – *Mountain livestock farming systems* and *The ecology of mountain pastures and meadows*. The conference dinner will be held on Thursday evening.

Valle d'Aosta, in the Italian Alps, the setting for the 5th Forum from 18-21 September 1996.



Francesco Petretti

On Friday 20 September the theme for the morning is *Integrating agriculture, environment and social issues*. During the afternoon concurrent workshop sessions will address the title of the conference, namely the integration of high nature-value mountain livestock farming into EU policy development.

The titles for the workshops are:

- W1 How do we encourage and enable farmers to maintain and manage low intensity farming systems?
- W2 Farming with nature – What further information is needed most urgently and how do we turn it into action?
- W3 How can existing Community legislation and policy instruments be developed into a more supportive and coherent rural policy?

On the final day, Saturday 21 September, the first session looks to the future and will provide an opportunity for preliminary results from EU funded research (including DG XI and DG VI) to be presented and discussed. We hope to include a paper from an official of the European Commission which will outline potential developments of the CAP. The final session will be devoted to discussing and debating the principal outcomes from the 5th Forum and agreeing *The 5th Forum Conclusions* with a guided discussion and an open forum. The conference ends at 14.00 to allow delegates to travel either on Saturday afternoon or Sunday.

As in previous years the number of delegates will be limited and early indications of interest and bookings are essential. The administrative arrangements are being dealt with in the UK by Kate Partridge at IEEP London and in Italy by Francesco Petretti. Offers of papers and posters can be sent direct to Dr David McCracken, Scottish Agricultural College, Environmental Sciences Dept., Auchincruive, Ayr KA6 5HW; tel: +44(0)1292 525299, fax: 525333, e-mail D.Mccracken@AU.SAC.AC.UK.

Full details of the conference fees and the range of accommodation in Cogne, as well as booking forms, will be available from Kate Partridge (Cogne Conference, IEEP, 158 Buckingham Palace Road, London SW1W 9TR, UK; tel: +44 (0)171 824 8787, fax: 824 8145.

Eric Bignal

Edited and published by the European Forum on Nature Conservation and Pastoralism. This issue was supported by the Joint Nature Conservation Committee.



**JOINT
NATURE
CONSERVATION
COMMITTEE**

The editors would like to thank the following for their help with this issue: D Baldock, G Beaufoy, J Dixon, P Eden, R Luick, K Mitchell, K Partridge, F Petretti, M Pienkowski, F Rennie, G Rudquist, N Webb, S Wenlock and N Yellachich.

Views expressed within *La Cañada* do not necessarily reflect those of the editor, the supporting organisations or the publisher.

Editors of this issue of *La Cañada*: Eric Bignal and Andrew Branson, Kindrochaid, Gruinart, Bridgend, Islay, Argyll PA44 7PT UK Telephone & Fax: +44 (0)1496 850330.

Designed and produced by British Wildlife Publishing, Rooks Farm, Rotherwick, Hampshire RG27 9BG.