



Research Network
for Livestock Systems in
Integrated Rural
Development

FAUNUS



LSIRD network

AIMS AND OBJECTIVES

by John Milne



FAUNUS

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LSIRDnetwork is supported by the Concerted Action programme of the European Commission DG VI. FAIR1 CT95-0114.

Print and Design
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Stonehaven,
Scotland

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Welcome to the first edition of Faunus. Faunus is the newsletter of the Livestock Systems in Integrated Rural Development (LSIRD) network and will be produced twice yearly. The LSIRD network is funded by the European Commission for a period of 3 years with the objective of: developing a European network of researchers studying the role of livestock production systems in disadvantaged areas in relation to rural development/agricultural policy, economic activity, domestic animal/environment interactions and landscape ecology.

At the moment, research in the area covered by LSIRD is fragmented, and a key aim of the network is to improve the integration of scientists working in livestock production systems, rural development, adding value to livestock products and environmental sciences in disadvantaged areas of Europe. This should increase the amount of high quality research being conducted in the area.

This aim will be achieved by the leaders within the network of the four areas described above: Dr George Zervas, Agricultural University of Athens, Greece; Dr Javier Martínez-Vassallo, INIA, Madrid, Spain; Dr Brian Revell, Scottish Agricultural College, Aberdeen, UK; Dr Thiéry Lecompte, Parc Naturel Régional de Brotonne, Normandy, France and myself, Dr John Milne, Macaulay Land Use

Research Institute, Aberdeen, UK, as coordinator developing an integrated programme of activities.

These activities will include two conferences and four workshops, where the themes chosen have the aim of bringing together researchers from different disciplines working in areas covered by the LSIRD network. The first conference entitled "The role of domestic livestock systems for rural development in disadvantaged areas" will be held in Greece in January 1997. You will find details of the conference elsewhere in the newsletter. I believe that the Conference will help set the agenda for the Network and I invite you warmly to register to attend.

As well as the above meetings, the Network will undertake three feasibility studies on possible developments in livestock production systems to further rural development in disadvantaged areas and develop a database of researchers working in the area. An Internet site is now open (see below) and I would encourage you to use the site to find out more about the LSIRDnetwork, to register as a member (no charge), and to contribute information about your own project to the database. The LSIRDnetwork is organised by Jerry Laker, who can be contacted by telephone, fax and e-mail at the address given on this page.

I look forward to working with you in the development of the LSIRD network.

LSIRDonline <http://www.mluri.sari.ac.uk/~mi361/lsird.htm>

Information on the LSIRDnetwork, including the online version of FAUNUS is now on the World Wide Web.

The editor would be pleased to hear of other related web sites or pages, so that links can be made to improve the effectiveness of this resource.

LSIRDnetwork is in the process of compiling an internet database of current research on livestock in disadvantaged areas. Completion of an LSIRDnetwork registration form, either by post, or through the web, will place your name on the database, and ensure that you remain on the FAUNUS mailing list. Along with this, we would invite you to supply some details about your project. These details will be displayed on your own web page, and you will be responsible for maintaining them up to date. The database will be available to all registered LSIRD members, and will be published in print in 1998.

Future editions of FAUNUS

It is intended that FAUNUS will become a source of information on projects all over Europe that are

working in some way toward solving problems, both scientific and political, associated with livestock production in disadvantaged areas. The editors invite articles from all professionals working in this field. The articles are intended to be short, around 500 words, and be accompanied by a full contact address, so that further information may be freely obtained and contacts made with the author.

Articles to be included in FAUNUS can be sent by email to j.laker@mluri.sari.ac.uk. Submissions are preferred in English, but may be presented in any of the major European languages, from which LSIRD will translate them to English for publication.

1st Conference in Nafplio

The first international conference of LSIRDnetwork will be held in Nafplio, Greece on 23-25th January, 1997. Sixteen speakers will address the four key disciplines represented in the network with a view to establishing a basis for future interdisciplinary studies. The programme and registration form are available from LSIRD and also on the World Wide Web.



Conference REPORT

Vth Meeting of the European Forum on Nature Conservation and Pastoralism

by Jerry Laker

The European Forum for Nature Conservation and Pastoralism has used each of the previous biennial meetings to focus on a specific conservation issue and to use this as a basis to develop a more general discussion on the conservation of low intensity agriculture and its associated habitats. The first meeting dealt specifically with the conservation of the chough (*Pyrrhocorax pyrrhocorax*), and this was expanded to address the conservation of the traditional farming techniques on which the species depends. In subsequent meetings, the Forum has applied this effective technique to explore the common ground between experts with a broad range of specialities in regard to improving the nature conservation value of the large areas of Europe traditionally managed by extensive pastoral farming. Particular emphasis has always been placed on the policy instruments such as the CAP and the opportunities for its reform.

The fifth meeting (September 1996), in Cogne, Valle d'Aosta, Italy, was no exception to this effective formula. The Aosta region is renowned for its rich mountain flora and fauna, and for the delegates, the meeting was an opportunity to appreciate the integral role that transhumant livestock grazing, predominantly of dairy cows, plays in the maintenance of this diverse alpine ecosystem, as well as the local economy and culture.

The first session of the meeting consisted of five talks to introduce different aspects of the livestock farming systems in the

Aosta valley. In particular, the factors affecting the special character of the Fontina cheese, and the important role that the seasonal grazing has in maintaining the environment, were highlighted by local experts.

Following this introduction, we were taken on a field trip up to the high mountain pastures, or *alpeggi*, which are grazed for a season lasting five months by local breeds of cattle. It is said that the diverse diet offered by the herb-rich mountain pastures imparts a subtle and unique flavour to the *Fontina* cheese, which is made each day during this season in houses located up in the mountains. As part of the initiation to *alpeggio* life, we were all treated to a typical herdsman's lunch of maize polenta, home-made sausage, Fontina cheese and fresh cream. This fortifying combination was then washed down with local red wine (and effectively prevented further activity for the rest of the day!).

In the next session on day 2, three papers described mountain farming systems in three contrasting regions, Italy, Switzerland and the Czech Republic. After the widespread devastation of the agricultural economy following the break up of Czechoslovakia there are encouraging signs that rural development initiatives are in place that will put a value on traditional farming landscapes, at least within the White Carpathian Protection Region.

Five papers were presented in the next session, four of which described ecological studies undertaken within mountain ecosystems, in regard to migrating birds, Alpine chough, and the management of alpine pastures. The fifth summarised the main messages from a new book, "Farming and birds in Europe: the Common Agricultural Policy and its Implications for Bird Conservation" (D.J. Pain & M.W. Pienkowski, eds., Academic Press). This book outlines the patterns of agricultural production across Europe, the development of the CAP, and the importance of different types of farmed habitats for birds and biodiversity.

The pressure to reduce agricultural subsidies is steadily growing, and justification even for their continued existence is becoming increasingly difficult in terms of social support and landscape preservation. The role of farming in maintaining biodiversity is currently a more compelling argument, and this concept was explored in detail by 7 of the remaining papers which looked at different aspects of agricultural policy and the environment. The recent Italian memorandum to the EU, calling for increased milk prices and exemption from set-aside in mountain areas was given as an example of a proposal for providing assistance to a rural area, that has not met with widespread support precisely because the memorandum does not take into account any agri-environmental measures.

Mike Hamell, speaking for DGVI, commented that there is no stop-point in the evolution of the CAP. Each of the last five agriculture commissioners have instigated reforms, and there is no reason why this should change in the future. He also said that member states are reluctant to enforce penalties on farmers for environmental protection measures. He warned against campaigning for agri-environment policies on a Europe-wide basis, preferring instead that resources should be targeted locally or regionally.

There are, however, a number of proposals for CAP reform, that would offer environmental incentives. It was reasoned that the current system imposes severe inertia on diversification, particularly quotas. A new system was outlined by Steve Goss, CEAS, that would maintain existing levels of support to farmers, while at the same time not cause any pressure to increase production. This idea would

Husbandry SYSTEMS

and sustainable environmental quality in Less Favoured Areas

by Fiona Newcombe and George Fisher

allocate subsidy on the basis of "adjusted forage hectares", with aid provided at several levels, or "tiers", depending the degree to which the production system meets a range of, mostly environmental, criteria.

In a graphic illustration of the power of an integrated approach to rural development, a case study was presented describing the Hindelang valley in southern Germany, where over the last ten years the mountain farmers have co-operated to maintain traditional farming methods, the products of which have been marketed locally to tourists, attracted by the clean environmental image of the valley.

This fifth Forum meeting was highly successful in demonstrating that, in spite of the great diversity of farming systems across Europe, there are many common themes between them in terms of the importance of traditional grazing management, and the opportunities to link farming, nature conservation, marketing of local products and tourism in rural development programmes.

Further details on the meeting may be obtained from:

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European Forum for Nature Conservation and Pastoralism

The European Forum for Nature Conservation and Pastoralism aims to bring together ecologists, nature conservationists, farmers and policy makers in order to increase understanding of the high nature conservation and cultural value of certain farming systems, and to promote their maintenance.

The Forum recognises that Europe's natural and cultural heritage is enriched by the wide variety of regional farming systems which work in harmony with local environmental conditions. However, many of these traditional farming systems are under threat. The Forum aims therefore to:

- increase understanding that certain European farming systems are of high nature conservation and cultural value
- ensure the availability, dissemination and exchange of supporting information combining research and practical expertise
- bring together experts to consider the problems faced by these systems and potential solutions
- develop and promote policy options which ensure the ecological maintenance and development of these farming systems and cultural landscapes

In pursuit of these objectives, the Forum holds conferences every two years, organises workshops and seminars, and produces two issues of the newsletter *La Cañada* per year.

Further information and subscriptions to *La Cañada* should be directed to **Eric Bignall**, EFNCP, Kindrochaid, Gruinart, Bridgend, Isle of Islay, Argyll. PA44 7PT.
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There has been considerable interest in the conflicts arising between agricultural systems encouraged by the Common Agricultural Policy (CAP) and nature conservation. The European Union (EU) has funded a four year research project that commenced in March 1996 to research 'Husbandry systems and sustainable social and environmental quality in Less Favoured Areas' (EQUFLA).

The broad aim of the project is to adjust primary production systems in Less Favoured Areas (LFA) so that they preserve landscape environments, become sustainable in terms of socio-economics and aid development of rural communities. The project involves a core team of 30 researchers from 5 European countries; Scotland, France, Italy, Germany and Greece. The scope of the project however extends beyond the scope of this core team to include groups with many different interests and viewpoints on the conservation of landscapes, and involves co-operation with other research teams and European projects.

To enable a project of this size to be workable, it is broken down into four tasks;

Task 1. To define the ecological management practices and indicators for important cultural landscapes in the EU. Current problems and support frameworks will be identified and decision support systems designed.

Task 2. Integrate animal husbandry practices with sustainable landscape management and use of forage resources (micro-landscape level). This task will focus on the grazing ruminant as the dominant agricultural land-use of hill LFA in the EU. The impacts of grazing will be described and novel management will be used to design decision support frameworks.

Task 3. Assess the impact of changes in husbandry systems on regional socio-economics, rural development and potential use of LFA land resources for amenity (macro-landscape level). The project will research the diversification of farming and rural communities and impacts of such changes.

Task 4. Assess the potential of landscape environment quality in meeting consumer expectations and markets. This will involve landscape products, consumer expectations, fulfilment and the impacts of green tourism on regional socio-economics.

These four tasks will be brought together by the use of common methodologies and incorporated to form decision support models and frameworks. Similar study areas will be used for the four tasks for each European partner country. The Scottish study region is the Loch Lomond catchment area.

Rural areas will benefit from the project as it will identify areas in which future diversification may be encouraged. The socio-economic methodology will enable rural communities to have a strong input into the project and to interact with other groups with interests in the landscape.

The project will draw together many factors that affect the European landscape and will give an overview of the problems and solutions for the conflict between current agricultural systems under the CAP and issues of landscape protection. It will aid the conservation of the cultural environment which includes the sustainability of rural communities, socio-economics and nature conservation.

For further information about EQUFLA please contact **Fiona Newcombe**, Grassland & Ruminant Science Department, SAC, Auchincruive, Ayr, KA8 9PU. Tel. + 44 1292 525418 Fax + 44 1224 525251

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Castile La Mancha

Conventional and Alternative Cereal-Sheep Farming Systems

by *Rafael Caballero*

In Castile - La Mancha (south-central Spain), a system of land use operates based on a balance between cereal production and sheep farming. This system is increasingly under threat, not so much for technical reasons, but mainly because of social and structural constraints, which impinge on diversification and the integration of sheep farming into the cereal monoculture systems.

Arable land occupies just under 60% of agricultural land in Castile - La Mancha, the rest being natural pasture, shrub-steppe (*eriales*), and Mediterranean forest. A two-year cereal-fallow system is the conventional crop rotation, for the most part, non-irrigated barley and wheat. The proportion of fallow to cropped land is 21% (1989 figures), or almost 1m ha.

There are 3 m Manchega breeding ewes in the region, utilising seasonal and low-quality natural resources (natural pasture, *eriales*, fallow and cereal stubbles). The commonest shepherding system involves continuous supervision on seasonally variable, open, unfenced grazing areas. Annual feeding programmes are unable to rely on the continuous availability of feed resources because of the poor quality of available forage, and climatic constraints. Flocks are evenly distributed

between meat and milk production, the latter being more prevalent on the plain, the former in hill areas.

On average, only 20% of arable farmers keep sheep, while 46% of the sheep producers are land-less pastoralists. The nature of the land resources, and this ownership regime result in extensive systems, occupying large, unfenced areas in relation to the size of the business. This structure has retarded the transition from open grazing to semi-enclosed systems. Young farmers tend to be disinclined to become involved in the sheep sector, and at present, more than 80% of sheep farmers are over 40 years old.

These cereal-sheep systems are the subject of a new study that will be carried out at La Poveda Experimental Farm near Madrid as part of a co-ordinated European research project "Diversification and reorganisation of productive activities related to animal production in disadvantaged areas" (*Diversification et reorganisation des activités productives liées à l'élevage dans les zones défavorisées* - DIVOR-DEF). The longer-term objective is to devise a Best Management Plan (BMP) that will increase the biological and economic efficiencies of the cereal-sheep systems. This BMP will facilitate diversification, re-organisation of present agricultural support policy, standardisation of products, and redefinition of strategies for the main social actors in the region.

Sustainable farm economic development can be enhanced through value-adding operations, through the better integration of sheep into the arable system, and better links between farmers, pastoralists, cheese and meat processors, and research and extension staff.

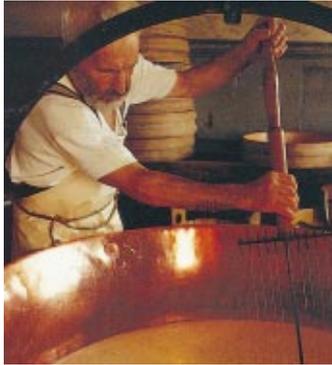
An earlier study carried out under the EU CAMAR programme indicated that an 8% increase in the area grown of forage legumes would be enough to cover the present forage deficit. A non-irrigated leguminous hay crop would also increase soil nitrogen for the subsequent cereal crop in the arable rotation. Further possibilities exist to derive income from the natural resources, particularly steppe birds, through hunting and bird-watching. However, the structure and maintenance of the existing systems arises from current CAP subsidy, which disincline farmers to technological and structural changes. The level of support is equivalent to some 40% of the total value of production.

These new objectives for agriculture in Castile - La Mancha will require a new regionally-targeted EU aid scheme which will provide support for the traditional cereal-sheep systems, without requiring the acceptance of environmentally damaging practices, and that will create or maintain a way of life that is socially and economically attractive, particularly to young farmers.

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hindelang

NATURE AND CULTURE

An Alliance of Extensive Mountain Farming with Lasting Tourism

by Roman Haug

The district of Hindelang, located in the southwestern part of the Bavarian Alps, has attracted visitors for more than a century. In that time, some 80 percent of its 5,000 inhabitants have become, at least indirectly, economically dependent on tourism. Today, Hindelang is one of the major resorts in the Bavarian Alps.

The main attraction for the tourists is the landscape. Some 85 percent of that area is protected as nature reserve or area of outstanding natural beauty. The area is famous for its rich ecological diversity, which is closely linked with the traditional management by generations of farmers.

The steep hillsides and damp meadows are, however, not suitable for the degree of mechanisation enjoyed by the agro-industry in the lowlands, and the compensation allowances paid to the disadvantaged areas by the EC have not been sufficient to prevent economic decline. In the Hindelang district, the number of farming operations has fallen from more than 200 to around 90. As a result, the areas most difficult to farm, which are the very ones harbouring the most valued Alpine flora and fauna, were being left fallow and began reverting to scrubland.

The tourist resort of Hindelang realised that this process could lead to the gradual disappearance of the outstanding natural beauty of its landscapes and, as a consequence, to the loss of much of the attraction for its guests. Inspired by the conservation programmes for cultivated landscapes which the Bavarian state government first began to offer in the late eighties, Hindelang arranged for the *Bund Naturschutz in Bayern* (Association for the Conservation of Nature in Bavaria) to map all the ecologically valuable areas, including the entire 1200 hectares (about 2965 acres) of farmland. The mapping subsequently enabled Hindelang to make the best possible use of the state programmes.

In 1992, on the occasion of the CIPRA Annual Congress in Schwangau, Germany, the "*Hindelang Nature & Culture*" association was founded with vigorous support provided by Alp Action and Riso Deutschland, an Alp Action Corporate Partner in Conservation. Within a very short time, 86 or the 87 farmers still active on the territory of Hindelang joined the association and thereby committed themselves to:

- Keeping not more than one large animal unit per hectare,
- producing themselves 90% of the needed animal feed within the territory of Hindelang,
- abstaining from the use of commercial nitrogenous fertiliser.

(which implies a 30% decrease in forage yields and thus causes more land to be put into use for maintaining the same livestock)

.....continued on page 8



Owing to these strict rules, which are similar to those of the recognised associations for ecological farming, it has been possible to cause all of the farmland located on the entire Hindelang territory to be converted to extensive farming. To make up for the consequent loss in revenue, an annual grant in the amount of DM 150,000 from the municipality's tax revenues is made available to the association on its own responsibility to the farmers according to the degree of difficulty they encounter in farming their land.

But the future role of farmers in Hindelang is not intended to be that of landscape gardeners. In fact, the extensive farming they now practice provides top quality dairy and meat products. To promote their commercialisation, a special quality label exclusively reserved for products from Hindelang, and made available to Hindelang's retailers, hotels and restaurants only for such products, was created.



What makes the Hindelang project so special is that it involves an integrated system. Agricultural production in Hindelang is not practised at the expense of the conservation of nature, but, on the contrary, has become a cornerstone of the protection of nature and the preservation of areas of outstanding natural beauty. This also means that there is no need to establish, by way of costly reconstruction, and then maintain, some sort of "museum" of alpine farming and agriculture to preserve the cultural heritage of the indigenous population. Extensive farming, which, it may be said, would solve quite a few problems throughout the EC, ensures the conservation of nature and landscapes, on the one hand, and helps to consolidate tourism as our inhabitants's primary source on income, on the other.

Roman Haug

Der Bürgermeister (Mayor)

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ACKNOWLEDGEMENT

THIS ARTICLE WAS FIRST PUBLISHED IN THE PROCEEDINGS OF THE V MEETING OF THE EUROPEAN FORUM ON NATURE CONSERVATION AND PASTORALISM, HELD AT COGNE, ITALY ON 18-21 SEPTEMBER 1996, AND IS REPRODUCED HERE IN SUMMARY WITH THE KIND PERMISSION OF THE CONFERENCE ORGANISERS, THE IEEP AND EFNCP.

Measuring the Impact of public institutions on lagging rural and coastal regions

by Anne Busselot

A collaborative European RTD project is aiming to evaluate public policies or programmes of actions for rural development in lagging regions, to propose "guidelines" for the implementation of diversification policies in marginal communities and to forecast the impact of future policies under various scenarios and in different contexts. The six elements of the research are:

- (1) to describe the institutional context dealing with rural development and its functioning.
- (2) to inventory the different policies implemented, with their area, target groups and potential recipients.
- (3) to understand the decision-making process of the institutions, i.e. on which beliefs do they base their policy-making decisions.
- (4) to evaluate these policies, characterising their impacts on local employment in a process or comprehensive evaluation.
- (5) to describe and analyse the local system with a focus on economic dynamics.
- (6) to simulate possible future policies or events.

The research studies the hyper-complex system comprised of many interacting complex systems i.e. the institutions, the enterprises and farms, the policies or programmes. The policies or programmes under focus are most often negotiated by several organisations as they may depend on joint-funding (e.g. EU Programme 5b), or simply be implemented by several institutions.

The data used for the analysis derives from three main sources:

- (1) documents : presentation of budget decisions, evaluations etc.
- (2) business interviews and
- (3) institutional interviews.

The first give information on the different policies operated by the various institutions, their reasons for operating them, their problems of choice in the drawing up of budgets, and the point of view of institutions on the evaluation of policies. The second give us more accurate information on which type of enterprises, farms or associations benefited from the policies, on the internal impact of the project on the businesses, in terms of outcomes, quantity and quality of jobs created or retained, satisfaction of the entrepreneurs, impact on the economic environment, as, for example, induced activity in other businesses. The third is a key source as the information recorded here will be useful for all of the points described in the structure.

This programme (European research project : AIR - CT94 - 1545) is co-ordinated by Dr Gordon Clark, Department of Geography, Lancaster University. The other participants are the departments of geography of the Universities of Leicester and Coventry, of the University College Galway, of the University de Caen (CERVIR), of the University of Valencia; the departments of agricultural economics of the University of Patras, of the Scottish Agricultural College of Aberdeen and of the Cemagref of Clermont-Ferrand; the Welsh Institute of Rural Studies, and the TEAGASC (Dublin).

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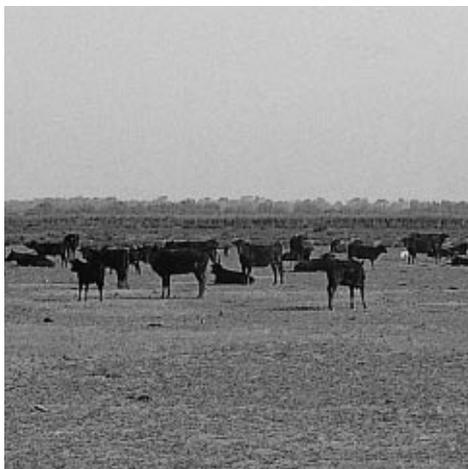
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Converting abandoned rice fields to rangeland in the **Rhône DELTA**

by *François Mesléard*



The Camargue, like a great number of the Mediterranean wetlands, has suffered for the last 50 years from the loss of natural habitats. The expansion of rice cultivation in the Rhône delta after the World War II led to the disappearance of large areas of natural habitats, most of which had previously been used as rangelands. During the same period, the number of horses and cattle increased, resulting in an approximately 2-fold decrease in area available per head. In the 1970s, a fall in the price of rice led to the abandonment of the less productive land, most of which was seasonally-flooded brackish or saltwater marshes.

Because of high soil salinity, summer drought and the disruption of landscape features required for rice cultivation, the restoration of the important biological functions that existed prior to cultivation, as primary production and wildlife habitat, is impossible without management. In this perspective, an experiment was initiated aiming at measuring the effects of artificial flooding on vegetation dynamics, and the benefits of management for both wildlife and domestic stock.

Six management regimes (two artificially flooded for 6 months and a control irregularly flooded by rain, with or without grazing) were tested in 18, 1-ha plots from 1 November 1989 onwards. These fields formed part of a 250 ha of abandoned rice fields uncultivated since 1976.

The results of the experiment showed that the management regimes for abandoned rice fields seem favourable for both conservation of wildlife and for improvement in pasture quality.

Artificial flooding led to an approximately 10-fold increase in the overall total production on the abandoned agricultural land. It also resulted in considerable increases in the crude protein, Ca, and P concentrations in the spring and summer.

From a pastoral viewpoint, seasonally-flooded abandoned rice fields therefore play a similar role to that of shallow marshes. In the autumn, rice fields, like marshes, only play a marginal role, they fulfil a similar function to that of non-flooded grasslands on the higher ground. From the wildlife conservation viewpoint, the results showed that abandoned rice fields can be managed for waterfowl, and that flooding, in combination with grazing, allowed the creation of habitats differing in their height and species composition.

Beyond protected areas, such type of management could be particularly adapted to low-lying land with poor productivity. They could then play a role as buffer zones situated between reserves and intensive agriculture, where conservation (habitats for wildlife) and agriculture (livestock production) could cohabit. This principal could be applied to numerous Mediterranean coastal sites, where intensive agriculture is unprofitable.

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Pilot Farms

An initiative to utilise new livestock farming systems in an upland region of NW Italy

(Piedmont Alta Langa)

by LM Battaglini & R Fortina

In Alta Langa (Cuneo province), livestock farming is a traditional activity producing typical regional products that has also been shown to be an essential tool for the appropriate use and exploitation of fodder resources and the environment. In the recent past, economic, social and technological difficulties have increasingly resulted in the agricultural abandonment of this area.

Marginalisation of Alta Langa can be only in part blamed on the industrial development of the Piemonte region; an important factor in this process has also been the restricted opportunities for mechanisation in agriculture and the limited development of alternative activities, such as tourism and craft industries.

Livestock on these farms is mainly represented by two cattle breeds (the double purpose original Piedmont and the dairy Aosta Red Pied, recently introduced) and a dairy sheep (Delle Langhe). Both bovine and ovine milks are used - mixed - for the production of a typical cheese. Two pilot farms have been established in this upland area (altitude, 700 m), a region characterised by a period of maximum growth of vegetation in springtime, and a more or less intense dry period during the summer. The grazing season is estimated to be, on average, 200 days (15 April - 31 October).

These pilot farms enable technicians and farmers to develop knowledge on livestock farming systems in order to:

- improve the farm productivity;
- promote the respect of the environment and the conservation of the landscape in these endangered upland areas;
- innovate professional training of the farmers, especially the younger farmers;
- training technicians by means of a course, "*conservation and valorisation of livestock farming systems in unfavourable territories*";
- solve problems inherent the farming families' quality of life;
- obtain useful information in terms of agricultural and economic policy to apply wider in upland areas;
- achieve a rapid transformation of the largest number of farms at the minimum expense.

The project is under the supervision of the University of Torino (Italy) and the scientific board is headed by Prof. A. Cavallero (Department of Agronomy) and Prof. M. Bianchi (Department of Animal Science). The leader of the *in loco* technical staff is Dr S. Galfione.

Useful information is already available from data on animal and pasture productivity, which are being surveyed in the extensive grazing systems used on the two farms. The first results demonstrate that there has been a beneficial effect from the change of management.

The aim of the programme (funded by EC Reg. 2052/88 objective 5b for the development of rural areas) is to transfer these new systems to other farms, to enhance their productivity and to improve the quality of life of families living in these marginal areas, while at the same time preserving a specific and distinctive environment. The plan represents a complete innovation in this region, characterised by traditional forms of animal production and the pilot farms are considered to be the best means for the transfer of knowledge and ideas in a social environment where changes are not so easily adopted.

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European ENVIRONMENTAL ADVISORY COUNCILS

Urge CAP reform to promote sustainable land use

In a statement signed by ten of the European governmental Environmental Advisory Councils, urgent action is demanded to promote more environmentally sustainable use of land across Europe.

The Councils draw attention to last year's EU ministers' conference in Sofia (October 1995) and called for a new policy framework to give stability and predictability to help farmers plan for the long term, and secure enduring environmental benefits. They urge that sustainable development principles, as defined by the Brundtland Commission (development which meets the needs of this generation without compromising the ability of future generations to meet their needs), need to be incorporated into all decision making from international down to local levels.

One of the strongest messages in this report is that ubiquitous and unconditional support for agricultural production is no longer appropriate, and should cease. Support should then be re-orientated towards environmentally sensitive farming, and withdrawn from practices which lead to environmental degradation of land. They advocate a system in which, alongside the removal of production subsidies, there should be a significant increase in payments to farmers and land managers for delivering environmental products and services. Practical and innovative ways to do that at the right scale need to be found by building on the experience of implementing the EU (Agri-environment) Regulation 2078/92.

Such policies would contribute to the enhancement of environmental quality across Europe, would help to sustain rural employment and be cost-effective.

The Advisory Councils go on to make a series of specific calls for action aimed at the EU and WTO.

Signatories to the statement:

- Austrian Association for Agricultural Research
Scientific Council for Environmental Affairs,
Austria
- English Nature
- Council for Environment and Natural
Resources, Finland
- Council for Environmental Advisors, Germany
- Council for Countryside Conservation,
Germany
- Council for Nature Policy, Netherlands
- Council for the Environment, Netherlands
- Environmental Advisory Council, Sweden
- Joint Nature Conservation Committee, UK

Some considerations for the development of Policy OBJECTIVES

by Javier Martínez Vassallo

Consider a traditional producer of domestic livestock, linked to the use of land in a disadvantaged region of Europe. We can first assume that he (or she) is willing to harmonise his/her activities with all relevant EU directives that may apply, as he/she will recognise the value of the principles that these policies try to promote: economic development, and improvement - or at least preservation - of the environment. This farmer will be looking ahead to an uncertain future characterised by increasing competition, and an end to agricultural subsidies. This same farmer is likely to remain fond of his cultural background, and may even aspire, influenced by largely urban values, to improve his standard of living. Policy development must seek to maintain an economic and social environment within which farming systems may develop which will allow farmers to survive, and indeed prosper, to continue their important cultural and environmental roles in rural communities.

Within this context, the farmer's activities are affected by a range of European policies, specifically: agricultural, environmental, research and development, and competitiveness (in relation to international markets). The farmer's decisions are also affected by national policies (with some countries already adapted to EU directives,

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The Advisory Councils call on the EU

- To work towards an integrated rural sustainability policy, incorporating sustainable development principles, and delivered in such a way which sustains regional and local character.
- To incorporate environmental objectives explicitly at the heart of a reformed CAP.
- To shift significant resources from unconditional agricultural production support into the expansion of regional and local agri-environmental programmes to meet defined ecological targets.
- To ensure that farmers and land managers throughout Europe meet defined and measurable basic environmental standards of good practice, which reduce pollution, contribute to environmental enhancement and sustain critical natural capital.
- To investigate the re-orientation of EU funds and other instruments to achieve more environmentally sustainable land use.
- To use structural funds to support enhancement of areas where biodiversity and landscape features have been lost.
- To develop environmental indicators to monitor the progress made.

The WTO is called on:

- To embrace sustainable development principles within trade policy
- To take account of international obligations to conserve biodiversity within multi-lateral trade rules.
- To ensure that environmental assets and environmental carrying capacity are respected and progress is measured.

The Countryside Council for Wales and the Heritage Council for Ireland have since elected to join the signatories, and the Councils are looking for expressions of interest from other countries of Europe, particularly in the south and east. The Councils will be working to develop the messages in the statement, focusing on the current debate over CAP reform. They would welcome contact with organisations in Europe which are carrying out research or action in this area.

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and some not), regional policies (at least in Spain, these have great influence, and there is large variation between regions), and even local policies.

Understanding policy to be the adoption of general principles which rule the nature of actions taken, the identification of a specific policy by an organisational body (government/administration or private) of any geographical area of operation, is a major undertaking, usually dealing with conflicting interests in society.

Once the arena and the main actors, with their interests, have been identified, it would appear that a political decision, (i.e. one without too many objections), and enough available funds, are all that is needed to put into practice the actions governed by a policy. There remain, however some big constraints to be taken into consideration:

1. The coherence and overlapping of a specific policy with others within the same geographical area.
2. The level of adoption, coherence and overlapping of a specific policy (and of its interactions with other policies within the same ambit) with other policies of different geographical areas.
3. The degree of specificity in the definition of actions which are considered to be affected by a specific policy.
4. The compatibility of different farming activities, both to different policies and to the different actions affected by each policy.

In this context, the identification of priorities for R & D for the integration of domestic livestock production systems with rural development may be addressed, after taking into account at least the following considerations:

- i The nodes of interaction between overlapping policies.
- ii Complementarity between traditional and diversifying activities
- iii The skills available and training possibilities.
- iv Levels of organisation for rural producers/actors to reach markets, and the ways in which they receive information back from the market on product quality and price.

Taking into account that neither farmers or environments are unique, other items, such as the following should be considered.

- i Typologies of rural development across the main European disadvantaged regions.
- ii Typologies of animal production systems.
- iii Socio-economic evaluation of natural resources and landscapes.
- iv Identification of suitable environments e.g. uniformity
- v. heterogeneity

The objectives of the debate being encouraged in this Concerted Action are of enormous importance. I would like to encourage specialists from all over Europe to join us by airing their ideas for future policy development in future issues of *Faunus*.

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Quality

PRODUCTS from extensive mixed farming systems on Lesvos Island

by J.Hadjigeorgiou,
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Efficient extensive farming systems in less-favoured areas are based on the optimum utilization of local natural and human resources. As an example, the mixed farming system practiced on Lesvos, one of the Greek islands, was studied in detail.

Farmers on Lesvos traditionally cultivate olive trees on the relatively fertile and accessible parts of their land for the production of quality olive oil. However, they also herd small flocks of sheep to graze the herbage under the olive trees, and rough grazing lands, for milk and lamb production. Olive tree prunings are also fed seasonally to these animals, and supplementary feed is provided during periods of low forage availability and high nutritive demand of the animals. Sheep milk is delivered to local cheese making plants, mainly for the production of a hard cheese named "Ladotiri". A scheme for grading milk quality is applied, based on milk fat and microbial content. Farmers allocate their working time, seasonally in different proportions, between olive tree cultivation and sheep raising.

A survey on 22 farms of mixed production orientation was conducted and data collected on the size, production orientation, inputs and outputs of the farm. The survey revealed that the average farm owned 4.9 ha of olive tree land and 9.2 ha of rough grazing land. However, these figures increased to 18.4 and 25 respectively through rented land. Average flock size was 92 sheep and goats for each farm, producing an average of 142 kg milk/year. Energetic requirements of the animals were calculated and found to be covered by 37% through purchased feedstuffs and 63% through grazing. Furthermore, the work invested on the average farm was 2340 hours/year from the farmer and 650 hours/year from members of the farmer's family, since the degree of the farm mechanization is very low.

This system makes effective use of renewable resources by providing 33% of the nutritional demands of the sheep (energy and other nutrients) through grazing the olive groves. Also, the available local workforce is sufficiently integrated in the production system. Nevertheless, the studied system could be improved through a rational regime of rough grazing land utilisation, and the creation of a local institution to guarantee quality of the cheese. If this were the case, more farms on the island would adopt this production system.

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